

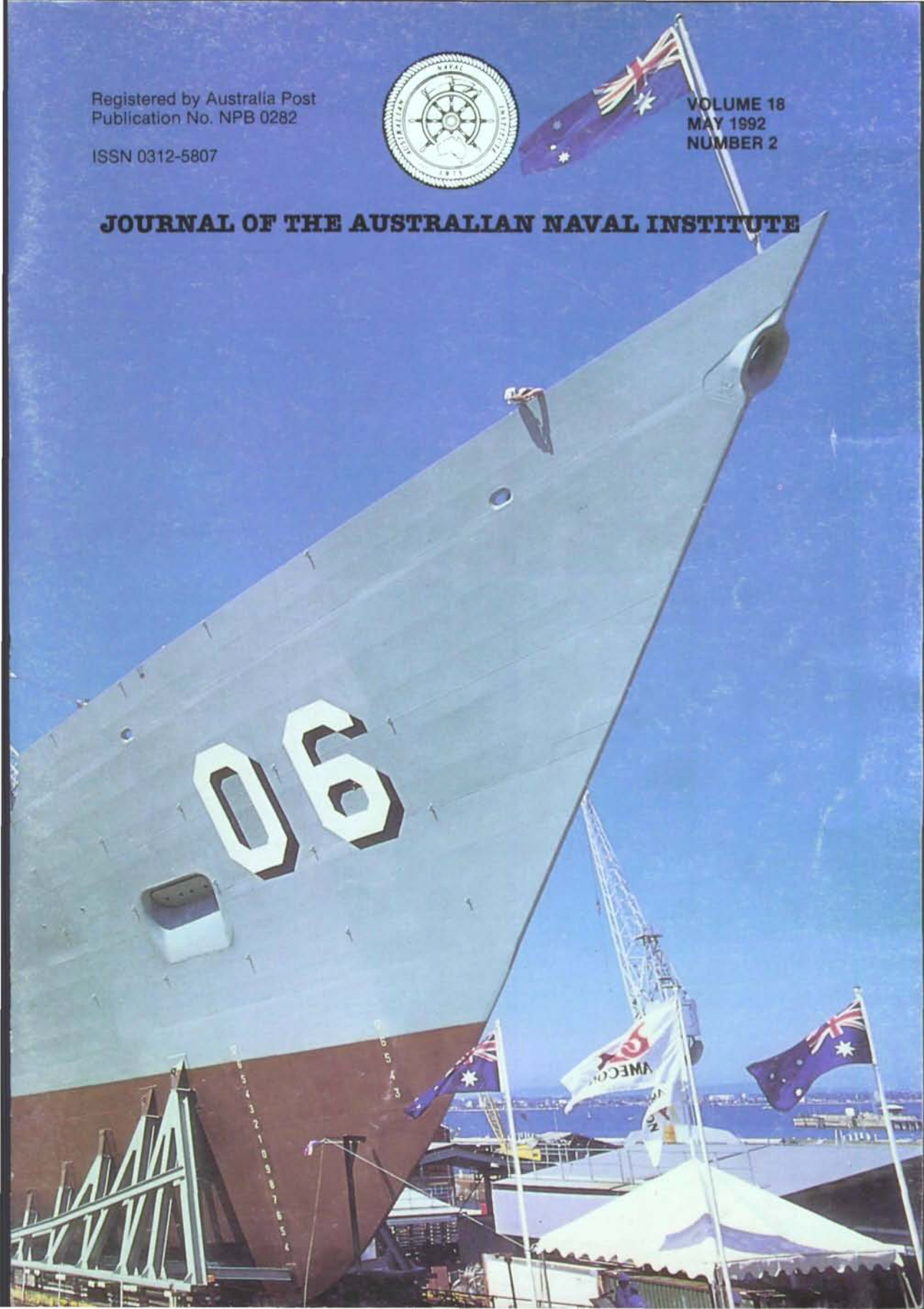
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## **JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE**



# AUSTRALIAN NAVAL INSTITUTE INC

The Australian Naval Institute was formed and incorporated in the Australian Capital Territory in 1975. The main objects of the Institute are:

- a. To encourage and promote the advancement of knowledge related to the Navy and the maritime profession,
- b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession, and
- c. to publish a journal.

The Institute is self-supporting and non-profit-making. All publications of the Institute will stress that the authors express their own views and opinions are not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute. The aim is to encourage discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.

The membership of the Institute is open to:

- a. Regular Members. Regular membership is open to members of the RAN or RANR and persons who having qualified for regular membership, subsequently leave the service.
- b. Associate Members. Associate membership is open to all other persons not qualified to be Regular Members, who profess an interest in the aims of the Institute.
- c. Honorary Members. Honorary membership is open to persons who have made a distinguished contribution to the Navy or the maritime profession, or by past service to the institute.

## DISCLAIMER

Views expressed in this journal are those of the authors, and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.

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## From the President



As the new President of the Australian Naval Institute it is my pleasure to extend greetings to all our members and friends, both in Australia and overseas. I would like to share some thoughts about the way ahead and how I see the institute developing.

First of all, the journal: We must guard against it becoming solely a repository for erudite papers and prizewinning essays, worthy and commendable though these may be. I would like to see a good spread of articles dealing with a variety of topics not only in the strategic field but embracing all aspects of naval life, including personnel and service conditions matters. Also, what happened to Master Ned? His short bursts were both masterly and informative. Perhaps someone knows where he is hiding.

secondly, our membership: I know that there have been stirring attempts in the past to bring more members of the naval family into the institute fold — often it is the same hard-working cadre which is involved in this evangelising. I feel that we will be more likely to succeed if we get our lectures, presentations and, yes, our journal, up to a really high pitch. It's by the enthusiasm and professionalism of our presentations, both written and oral, that we will spread the message.

Finally, we have now branched out into the book world, as evidenced by the biography of Sir Victor Smith AC KBE CB DSC. This was a pioneering effort which was successful thanks to the work of a lot of people, particularly Commodore 'Toz' Dadswell AM. While Sir Victor was truly a mighty (and most fitting) subject for such a book, there are other people and events which could well merit publication. Suggestions and offers of help will be most welcome.

I cannot close without paying tribute to my predecessor. Commodore Ian Callaway laboured long and hard in the service of the institute and its current robust health, not the least in the financial area, is a fitting tribute to his determination to promote the cause of the maritime profession.





## From the Editor

Following publication of the last issue of the Journal I received some phone calls concerning binding of the Journal, those unfortunate readers received multiple copies of pages 2 - 15 errors and more typesetting errors than in previous Journals. I would like to establish the extent of the number of Journals that had binding errors and would appreciate those readers that experienced the problem to contact me and I will arrange the despatch of another Journal to you. The publisher apologised for the event, indicating that this type of publishing error is rare.

The typesetting errors appear to mainly be the result of electronic formatting and spellchecker limitations. The use of the spellchecker does not solve the XMAS/HMAS interchange as the former will be accepted when the latter is required. The human checker will eradicate this in future. Occasionally software errors creep in when transferring the format of the submitted document from Word Perfect to Microsoft Word format on a Macintosh platform for final formatting to "camera ready" stage using Pagemaker publishing software. These latter faults we hope to minimise but some get through the inspection stage.

Following a human check of the contents of this Journal we uncovered both grammatical, abbreviation and software errors (mainly superscript not being carried across) following formatting into Microsoft Word. In order to avoid delay in publishing the grammatical and abbreviation errors have been corrected but a small number of the software formatting errors have remained. A slight change to the procedures used to get the Journal to the "camera ready" stage should avoid future problems of this nature.

Whilst I endeavour to stick to the conventions outlined in the government style manual, some of the Journal articles have displayed an excessive length of footnote information and long bibliography. I would prefer footnote detail to be brief. If this is not possible why not include the information in the body of the document? And whilst on the use of footnotes, I would prefer to see the style as used in Wordperfect 5.1 (and other software such as Microsoft Word) where the footnotes are displayed below the line on the page they are marked. This is easier for the reader — except where the footnotes are lengthy (hence the earlier remark). The bibliography I would prefer to be shorter but I understand there are cases where this is not possible. If intending authors have strong opinions on this matter I would like to hear.

On page 4 of the Journal there is a set of guidelines to authors. This will be revised in due course, but it is considerably easier to get the Journal to "camera ready" stage if documents are supplied on diskettes in either of the following wordprocessing formats: Wordperfect/Microsoft Word or any of the popular Apple macintosh packages. The use of a scanner is not efficient unless a laser quality typeface is forwarded. Aside from the above editorial comments I wish to commend to you the articles in this Journal — the Coral Sea theme being continued from the previous Journal. Finally, the Treasurer has advised me that there is a need for a validation of the data held in the ANI database concerning the address details of members and authors. The Treasurer is holding cheques for authors which he would like to distribute. Could those authors who have contributed articles expressly for publication by the Journal please contact me or the Treasurer (Fax/Telephone) so that address details can be updated. According to membership records only about 35% are financial. Those whose subscriptions are outstanding should receive notification with the August Journal.

Regards,  
Don Agar



## Guide for Authors

### General

All readers, whether members or not, are invited to submit articles for publication. Articles should deal with interesting recent developments in maritime matters which have a direct or indirect bearing on naval matters.

Contributions from overseas are welcome.

Articles specially written for the ANI, and accompanied by a statement to that effect, may be eligible for prizes from time to time.

The Editor reserves the right to reject or amend articles for publication.

Articles from 2500 to 6000 words are welcomed and the Institute will pay for original articles at \$10 for each 1000 words published.

Long articles should be subdivided appropriately and accompanied by an abstract of up to 75 words describing the scope of the article.

The Journal's established style is for impersonal, semi-formal, prose. Where a published work, whether serial or book, is directly quoted, due acknowledgement should be given. Specific numbered references should be used where appropriate and a suitable bibliography appended to the article.

### Illustrations, photographs, graphics etc.

While glossy black-and-white prints are preferred, colour prints with good contrast are often acceptable. Attach caption and other information to the back of the print with a small piece of tape. A width/height ratio of about 5:4 is ideal. The Editor likes to include a mix of vertically (portrait) and horizontally (landscape) oriented photographs. Tables, diagrams and graphs should, if complex, be carefully drawn in black on white paper and treated as photographs. Simple tables can be reproduced in the typesetting process, but it is the author's responsibility to ensure the clarity of the information presented.

### The typescript

As much of the journal as possible is entered from computer disk or via an optical scanner. The preferred disk format is Macintosh but popular MS-DOS packages are welcome. If in doubt, submit ASCII text format. The preferred typescript format for scanning is laser or daisy-wheel printer output, single-spaced on A4 paper. High-quality dot-matrix (24-pin) output may be acceptable. Lesser quality (9-pin) which might need to be entered by hand, should be double-spaced. Three hard copies of the article are required whether submitted on disk or otherwise.

### Copyright and clearance to publish

In submitting material to the Journal, authors are granting the ANI a non-exclusive licence to publish. It is the responsibility of authors to obtain from the appropriate source permission to publish material that may be regarded as sensitive in any way. If an author ventures a personal opinion, the context should make it impossible for any reasonable person to infer official sanction for that opinion.

### The cover sheet

The author's name, address, telephone number, present position and brief biographical particulars. If an article has been previously published, a publication history should be included. Any outside assistance accorded the author in research or preparation should be acknowledged.



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# SO YOU WANT TO DRIVE A GREY FERRARI

By CAPT D J Shackleton RAN

## IN THE BEGINNING

So you are aspiring to command an ANZAC destroyer, or, if you are really lucky, a DDG. You need a watchkeeping certificate and you are looking for some advice on how to speed up the process, commensurate of course with the need to remain a Phase 4 officer long enough to fully exploit the party circuit and the XO's sense of humour whilst you are 'under training'. You figure that if you can afford the SAAB or BMW, and drive it around at incredible speeds, it really can't be that difficult to drive a warship — the other guys and girls make it look so straight forward — it's a snack. But why does the Navigator keep whingeing at you — is he from the northern hemisphere — have you noticed that all Navigators seem to have peptic ulcers that explode at the sight of Phase 4's, it must be something they learn on the long secret handshake course.

For those of you readers to whom this circumstance is apropos your current predicament, I have penned these few words in the hope that it will save you some angst with the 'old man', and help life assume a more meaningful posture. If you have passed the point where comparison of your experiences with herein is useful, perhaps you can reminisce.

Of course the real premise behind becoming a qualified OOW is to impress the rellies, but another is to have fun at great speed and feel ones pile is in ones sock. A watchkeeping certificate, endorsed for a destroyer, is the ticket you need, for they are the ships in which being an OOW requires you to have the skills to drive a battleship grey Ferrari. For those who continue to demonstrate their abilities to excel, it is the fundamental qualification of a seaman officer to future career challenges, and potentially their own command.

A destroyer bridge watchkeeping certificate is a license to kill. I would expect submariners and

aviators to argue that their skills are harder to obtain and hone, have you ever met any that don't argue, but driving a destroyer into station on another from ahead with a relative closing speed of about 60 knots and combined mass of over 9000 tons, with only the pelorus and distance meter to help get you in the slot, requires talent, nerves of steel and courage. Acquisition of a watchkeeping certificate shows that an officer has reached a significant milestone in their career as a professional seaman. One definition of a professional is:

'...one belonging to one of the learned or skilled professions...' (*Macquarie National Dictionary*)

and that of your own choosing by being a member of the RAN, you want to be a professional officer in a professional Service which applies that learning. This means being a good OOW.

## WELCOME ABOARD

So Dave and Davina, you have just joined HMAS *Incomparable*, the most professional destroyer in the RAN, you are here to gain the certificate which qualifies you to join the select group of officers authorised to exercise sea command. What should you do?

First, after meeting the Captain and Executive Officer, you find out the names of the other officers and at least the senior sailors. You will need to know more as time goes on but these are essential. Next, read Captain's Standing Orders and find out, at least, how the Captain has directed the OOW to perform his task, including when he is to be called, and the relationship between the OOW, the Executive and Navigating Officers. After this you need to find out about the ship's handling characteristics and any special rules about use of the propulsion system — what are the maximum and minimum speeds or revolutions to meet particular configuration arrangements.



what are the machinery defects which will produce different results and limiting speeds.

Read the Bridge File. Cover to cover. You need to be at least able to find the information you need if it is not memorised. Find out where the navigation light switches are, how to dim them and how to turn them on and off; find out where the emergency switches are; find out where the upper deck lights are and how to get them turned on and off. When they don't work — who are you going to call? — you need to know. Make sure you know about the darken ship arrangements and how to make them happen.

Spend a couple of hours learning what every switch, knob and dial does on the bridge, find the dimmer switches, work out the communications units — where does the headset plug in, how does Open Line work, how does the main broadcast operate and how do the various general alarms function — what do you do when any of the magazine alarms go off, what effect do the Action etc alarms have on the SRE system. Go through changing over steering, memorise the procedure, find out where the steering motors are operated from and what are the likely symptoms of various types of steering failure. Know the Rule of the Road. You will not be permitted to keep solo watches until you do, and that will leave you feeling embarrassed as a professional.

Last but not least, memorise the revolutions per knot in those ships where this is still done. Prepare a card for your pocket which has the table copied onto it, as well as any useful formulae you use for station keeping. Bring it to the bridge — with your sense of humour — every watch. Remember the red torch at night time, or how will you see it.

### **AUTHORITY OF THE OOW**

Your authority is derived from the traditional and legally enforceable concept that the OOW is the Captain's representative. Only he can relieve you of the responsibilities of being the OOW, but the Executive Officer can also relieve you if the Captain has so authorised in his standing orders — you need to check this point.

This means that Heads of Departments cannot give you orders so far as your personal responsibilities are concerned, and neither can PWOs closed up in the bat cave. But you would be wise to listen carefully to their counsel because they may be aware of things you are not. By extension, as an ASLT, or of not much more seniority, you have the responsibility and accountability for the ship and her people on your shoulders. You would do well to lose some sleep contemplating this, and coming to grips with what it means.

Your authority means that you must look at life through a serious pair of glasses. All that you do reflects on your reputation as a professional seaman officer, and your reputation is everything in a professional Service. By definition this means that you will want to be one of the best. If not, then you have the wrong address.

### **TAKING OVER THE WATCH**

The best way to start is at the beginning. You should always start the watch by a visit to the operations room so that you can find out what is going to happen operations-wise during the time you have the keys to the Ferrari. There is merit in finding out which problems you are going to be presented with and those solutions which might work in the next four hours or so. Take the time to be briefed by the PWO on the setting signals and instructions relevant to the practice serials you will be involved in. This is not only for the Wombles to do — you are part of the team, not a liability. If you are in more serious circumstances, read those parts of the operation order and implementing instructions as are available to you, remember that the OOW is part of the command team as well and ignorance of operational matters will make your life more difficult (you may need to do this in your own time as part of your own preparation to be effective). It also helps if you are on speaking terms with the PWO, and are able to help him bring off the most brilliant tactical coup while also scoring points with the C.O. — you will have rights to some of the kudos and maybe champagne later in the Wardroom bar if it goes well.



A visit to the operations room also has the benefit of letting you know how much shipping is around, and allows you to build up an early mental picture of the avoiding action you may have to take, particularly if sea room is tight and you are constrained to a limited number of alternatives. Arrive in a positive frame of mind, committed to spending your watch only thinking about your responsibilities.

Leave other matters behind to be worked on later. If it is quiet, spend some time considering the 'what if' aspects of your responsibilities.

You will already have a good idea of what to check with the off going OOW, but most importantly, do not accept the watch unless you are perfectly happy with all which has been bequeathed you. It is foolish to think the Captain will thank you for accepting a bag of nails. Apart from finding out how many propellers have been lost in the preceding couple of hours, put a fix on the chart. The Captain will have little happiness, and neither will you, if you get the ship lost, or worse, have her stand into danger. When you have done this, check to see that the track for the remainder of the watch is on the chart and, if necessary, has been correctly transferred to the next sequential chart (don't forget your relief in this respect either). Find out if the Navigator has left instructions when to be called. Remember, the OOW does not have the authority to arbitrarily decide which port to visit.

Next, find out which ship is the Guide and which others are in the formation, and who is leaving and joining during the watch, also if any ship is expected to operate aircraft or conduct replenishment. Have a look at Daily Orders, sometimes they are accurate in their forecast of events. Find out what the hands are doing, whether any RADHAZ conditions exist and if any weather deck restrictions are in force — it is your option to put the upper deck out of bounds if weather conditions make it unsafe. Make sure you know how to contact the watch on deck, and who the swimmer is — and don't forget reliefs for lookouts. Last, but not least, make sure you know what your own station is and any likely changes that will happen during the watch, including any

that may be precipitated by another ship operating aircraft etc. You must think ahead.

If applicable, read and sign the Captain's Night Orders, sometimes they will be written for day time activities as well. Read them carefully and ask the off-going OOW to explain any points. You should remember that the Captain cannot put all his thoughts into Night Orders and they must necessarily be brief. If you have any doubts at all, you must call the Captain.

When, and only when, you are completely happy that you have fully taken in the advice and details necessary for a professional watch, you may use the words 'I HAVE THE SHIP'. This simple phrase of acceptance totally transfers the onus to you for all things which happen from then on, the buck stops fair and square with you. IF YOU ARE NOT COMPLETELY HAPPY, DO NOT ACCEPT THE SHIP, YOU MUST CALL THE CAPTAIN IMMEDIATELY. You have no discretion in this. It is better to do this and perhaps feel slightly embarrassed than be responsible for a disaster.

The Captain will not be critical of you for this course of action, and will make other OOW understand you will not accept a pig in a poke for a handover.

## **NOW SHE IS YOURS**

Having accepted the watch, what should you do, how should you behave, what do others expect? First you have to establish yourself as the controller of the bridge. You must act as if you are in command; always answer the intercom or telephone 'OFFICER OF THE WATCH'. This does not mean that Adolf Hitler can be reincarnated, but it does mean that others on the bridge and those that deal with your bridge staff understand that they are dealing with a professional officer who sets the example and expects only the best from all who are present. You must ensure that an atmosphere of formality sensibly tempered to foster team commitment exists on the bridge. This is not the place for staff to read paperbacks or generally take no interest, they all work for you so you must ensure that they



understand what is expected of them. Does the Bosun's Mate have his Bosun's Call and a cap, do you have your own cap in case saluting needs to be done.

You have a badge of office, not your headset — your binoculars, and they should be worn for the whole watch. The key word in OOW is 'watch'. Not only does it relate to a time span of responsibility, it refers to being alert and seeing all manner of things with a trained eye. You must look out, predominantly forward of the beam, but frequently scan the entire horizon for the unexpected ship, aircraft or other object you were not aware of before. Once in five minutes all round is not too frequent, but develop the habit of walking from wing to wing just for the purpose of looking out. This does not reduce the responsibility of lookouts to do their job, but if they know they are on watch with an officer who prides himself in being first to see things, it can act as a challenge to their own prowess. If you are constantly seeing contacts first then the lookout needs to be censured and encouraged to do better. Make sure they are briefed of anything particular to watch for and that they are formally directed which sector to look at. Cooks and Stewards sometimes make the best lookouts because to them to be on the bridge is a novelty.

Everybody on the bridge is a lookout. This includes the Quartermaster, Bosun's Mate and Signalmen when not involved in their jobs. The Leading Signalman does not have the option of spending the watch in a chair and taking no interest — sometimes he will be the next most experienced man on the bridge — use his talents, and those of the QM, for your own purposes, and you will probably find they really are as good as they (usually) modestly suggest. The lifebuoy sentry is also a lookout, make sure you brief him as such.

Being an OOW is busy work if you are doing your job, having an assistant is a luxury. You have to be able to cope on your own, in company, in the Malacca Straits at night at 20 knots. Work at being able to take a fix, plot and DR/EP and write up the OOW note book and log in 3 minutes or less. While you are doing this, make sure the

remainder of the bridge team are watching out for you. Let one of them answer the operations room intercom or other stations which call up such as the engineroom: They will develop a greater sense of involvement if you let them do some of those things normally reserved for officers, and they will look forward to being on watch with you because they know they contribute to the overall solution by being part of a professional team.

Conning the ship is one of the joys of being an OOW. There is nothing like a starboard 95-ish at high speed to give one a sense of power and satisfaction when you can roll out exactly in station, (make sure the ship's company knows that a Grand Prix performance is about to happen — they enjoy it too, but they don't appreciate the spoiled meals and cleaning up caused by inconsiderate Ferrari drivers). But it is unprofessional to go past the new course and leave a zig zag for the fellow astern to follow. The same is true of getting the ship to about 10 degrees off the new heading with rudder still on and telling the helmsman to steer the new course — you are effectively abrogating your responsibility to make the ship point in the right direction. Don't let the ship meander by not giving the helmsman a course to steer. Don't let him decide how much wheel to get you on course when in close company. Do get the ship to within 2 degrees before giving him a 'steer', and if in close company, try to get the ship precisely on course. If the course alteration is however, less than 10 degrees and you are not in close company, then it is acceptable to give the helmsman a wheel order followed by the course to steer. But never forget, it is your responsibility to have the ship pointing in the right direction all of the time.

Fudging fixes and not being willing to admit that a problem might exist, however, means you are not really entitled to hold your license to drive the Ferrari. There is therefore every chance it will be taken away, meaning you shall certainly be relegated to shameful disgrace as the man who betrayed the trust of his shipmates — gloom!!



You are now happy you have got it weighed off, but how accurate should station keeping be. As accurate as possible is the answer. This means one degree for bearing and up to 50 yards for range in reasonable sea conditions. In line ahead you should be able to achieve station keeping to within one degree.

Relative velocity is a tricky thing. But once you have the principles it is not difficult. Read the instructions (especially when all else fails) on how to use the Battenberg, but most importantly try to develop in your mind where you are going to be when in station and then work backwards to calculate how you will get there. The reciprocal club is easy to join, put yourself in the middle of the plotting circle and work it out that way.

The operations room has a large impact on how effectively you can perform your own task, as well as the overall performance of the ship. Bridge and operations room teams must work together as a combined team, or else everybody will have to unnecessarily work that much harder. You should expect assistance from the surface plot in helping you stay alert to the shipping in your area, and the RP's ought to provide you with details of courses, speeds and closest points of approach for ships which will close. But the sailors manning the plot need your instructions as to what you want. As you are taking over the watch, and having already been to the operations room on the way to the bridge, you should have formed an idea of the shipping density and how much assistance you need. For instance, in a busy shipping area it would be appropriate to tell the operations room to only report contacts which will pass within say, three miles, when those contacts are at eight miles; this gives you time to handle the reduced number of reports and work from one problem to another without becoming overloaded. Don't be afraid to change the instructions when it becomes apparent that you are not getting the information you need when it is needed; don't forget to order a watch to be kept for a high coastal point on any of the ships search radars available when making a land fall or if fixing is becoming difficult.

There are control words for giving the surface plot your instructions in terms of how the plot should report contacts. Learn them all. Don't simply tell the sailors to 'watch' a contact unless it is entirely inconsequential to your concerns; there is merit in ordering the contact to be reported again at a shorter range — that way you don't forget about it, if the CPA is some distance off you can order the contact to be reported at that point, again you are then reminded of its presence and reassured that it presents no problem. Computerised operations rooms do not always result in an improved standard of service to the OOW — computers are demanding little beasts and can become an end in themselves — you must be positive and persistent in your statement of requirements.

Use of the operations room does not relieve you of calculating your own CPA's; use the plotter on the bridge PPI or calculate it yourself, but compare it with the operations room and in a subtle way let them know that you will check their results — there is no harm in a competition for accuracy. The PWO and OOW must work as a team but, like any good professional personal relationship, you need to know your obligations to each other; do not make assumptions about who is doing what — for that is the way to confusion, certain disaster, and perhaps a 'friendly chat' about life in general by both of you and the Captain. Both of you have clear responsibilities, and you need to be fully aware of them.

Open Line can be awkward until you are used to it; don't forget your prime responsibility is safety, but you have to be able to achieve that at 28 knots in company, in rain, at night and with no radar. If you find the headset is constraining your ability to do your job, don't think twice, take the headset off, tell the PWO and call the Captain.

## EMERGENCIES

As the OOW you are always going to be the first to react to an emergency, this also means you will need the support of the team that is your bridge staff. Not only does it mean that you need to be capable of recognising when a crisis exists, it means that you (meaning you) will be primarily



responsible for solving it until others are able to grasp the problem and take over. For instance, other people may be injured or access to the bridge cut off — so who is going to take charge? — YOU ARE, that's who. Make sure your bridge team know what to do in any of the circumstances you could find yourself in. There is no future in having to operate the Main Broadcast as well as conning the ship because no one else knows the pipes and routines for Emergency Stations etc. See to it that the QM instructs the Bosun's Mate, he can be very useful when trained.

You owe it to yourself to think about these things — it could pay off one day — and then you will really be famous. For instance, recovery of a man overboard is something I hope you will never have to do, but you must always be prepared. Decide early whether you will use a swimmer or the boat, and adjust your pick up arrangements to suit. Spare a thought for what it must be like to be in the water watching your ship steam off. Seeing the lifebuoy sentry spinning salty dits with a mate, and the cooks ditching bio-degradable gash (but not plastics) as she goes; only to then feel real terror at the prospect of being recovered in one piece as she turns around and comes charging directly at him at the speed of watery light and attempting to stop terrifyingly close amidst a great swirling of water as the fast astern rotating propellers sweep many tons of water toward the ship's boat — which loses steerage and turns over in the turbulence. Gloom!! Remember, the boat is more manoeuvrable and faster than the ship if you have RIB; so get the boat in the water as quickly as possible.

Swimmers don't like 15 knot currents or being sucked into the propeller blades either. Speed of recovery is of the essence, but the word is recovery, not butchery.

Ensure that the operations room help is used, if necessary having someone repeat their information to you while you are on the bridge wing — but don't ignore it — the man is one of their shipmates. Personally make sure that an individual is nominated to watch and point at the man in the water while constantly calling the relative bearing to you. Ideally you should also

watch the man, rather than being glued to the pelorus and not able to see where you really want to go. Don't forget either to stop the ditching of gash, attracting white pointers is only acceptable at the beach, and then with some discretion. If the Captain takes the con, make sure he knows where the man is and that you continue to provide him with the maximum assistance you can in running everything else.

## NIGHT TIME TIPS

Night vision is important, so plan to start night watches about 10 minutes earlier than those during daylight hours. At night insist that the chart table light is dimmed and that extraneous light is cut off; make sure that all other dials, strip repeats, signal desks, bosun's mates positions etc only have the minimum light necessary for the job; if nothing is going on — turn them off. A great way to see a ship at long range at night is the flash up of cigarettes pipes and cigars, make sure that precautions are taken to prevent the use of portable flame throwers on the bridge and upper deck.

Night time also has the effect of changing your perception of distance. Take the trouble to look at other ships through the binoculars and develop a feel for how much of the field of view is being taken up, take notice of the size of the wake and bow wave. When there is radar silence, make sure that you know the distance between steaming lights and side lights and various combinations, because that will be the only way you can set the scale on the distance meter.

Night time station keeping without radar and with navigation lights switched off can be exhilarating, not to mention making you wish it was somebody else's watch. You need to develop your seaman's eye to judge distance and the aspect of those ships you can see so that you can gauge whether an opening or closing range rate is happening. Have you worked out what you are going to do 'if', and as importantly, have you decided what the triggers will be to make you react instantly rather than believe it isn't happening to you.



The OOW is responsible for calculating sunrise and sunset and this is a good time to test your abilities of working to an accurate standard. There should be no reason that each cannot be worked out to within 30 seconds, a competition between the OOW and his assistant is always beneficial if circumstances permit, and for one good with numbers, champagne can become cheaper this way. Don't forget to work out moonrise and moonset. While quiet night watches are opportunities for those not yet in the wheelchair brigade to contemplate on the probabilities for meeting celestial objects ashore in exotic places, and for those so afflicted to reminisce, there is also the more immediate and practical benefit to all OOW of checking the gyro against the celestial objects obvious in the night sky.

## CALLING THE CAPTAIN

Captains of ships are posted to the billet at least, in part, because they don't like to have an all-night-in; they have also learned the art of suppressing ecstasy associated with this privilege. There is the truism, however, that they will certainly not thank you for not calling them because you felt he was tired and needed sleep. Orders will invariably contain standard occasions for calling the Captain, but remember, those occasions are not just for the night time, they are standing requirements to call him for the myriad of occasions he has deemed it necessary to do so irrespective of the time of day and night. And don't assume that they will be the same for every ship, you must read and memorise them, and additionally apply commonsense by calling him when you think that things just do not feel right.

Even though it appears the Captain is awesomely knowledgeable, he still wants to know more — there will, and this might come as a surprise to you, be circumstances he has not been able to foresee, and it is here you must use your judgement.

There are two simple tests over and above the standard occasions on which you should call the Captain.

The first is:

'will it only take one or two things to happen to cause a close quarters situation which will require me to take action.'

This should be self evident but it requires a conscious and constant appraisal of the situation you find yourself in, it is vital when such circumstances exist that you do not let yourself become distracted by other matters. The second and more important is:

'would I want to know if I were the Captain.'

This latter rule of thumb is fundamental, you are the Captain's representative for his responsibilities and he can either be courts martialled or promoted on your judgment — but so too can you, and it is that serious; and that is why it takes so long to get a ticket, and that is why a qualified watchkeeper is a somebody.

## HANDING OVER THE WATCH

Having managed to get through the watch it becomes time to prepare to hand it on the next OOW. Double check the Guide's course and speed and your own station, find out if any signals are pending. Put your own fix on the chart so that you feel comfortable in asking your relief to do the same.

Get the Bosun's Mate to get rid of the empty coffee cups and empty the ash trays, tidy up the chart table and make it look as if a professional has been in charge of the bridge. Update the machinery and radar states and manpower disposition if applicable, as well as any routine stateboard matters.

The most effective way to prepare to handover the watch is to go through it in your mind as if you were coming on watch yourself, ask yourself all the questions you would want answers to if the person climbing the ladder to the bridge was yourself. In the morning watch, and certainly before the Captain arrives to survey the scene, make sure the litter is removed, bright work is done and the windows cleaned both sides. Don't forget to have the bridge ladder and its runner



cleaned as well as ensuring that the deck is swept and scrubbed out if possible. Who can keep a professional watch in a slum. If you are on the ball early in the morning, many brownie points can be gained by making sure that father is not left out of the bacon and egg sandwich order given to the breakfast galley team.

### THE PAPERWORK

The job is not finished until the paperwork is done, remember what your mother said. Make sure the Log and all other administrative items are completed before you start the handover to your relief. OOW are not to leave the bridge until this has occurred.

Remember to check the Assistant's entries during the watch. Those who are inexperienced sometimes lack the ability to recognise that they should be asking for help. It is your signature in

the Log and OOW Note Book, and you are accountable for their contents; make sure you can live with what they portray.

### SUMMARY

You are commended to inwardly digest the sentiments of the preceding comments and advice. Your Captain will be looking for its application during your watch on the bridge of the ship for which he has ultimate responsibility.

From this missive you should have a clear understanding of needing to adopt a very personal commitment about being a top class OOW; because, very simply, your reputation is the same as that of the ship, and vice versa. Your aim is to be one of the best.

And then you can borrow the keys to the grey Ferrari.



### A short note on style and spelling:

As far as practicable clashes in style in the Journal are settled by reference to the *Style Manual for Authors and Editors*, a highly-regarded publication of the Australian Government Publishing Service. The *Style Manual* has a solution, elegant in its simplicity, for the age-old clash between British (Australian) and North American spellings for place names: Pearl Harbor is a place name and is spelled the way its residents spell it. If the town were called Pearl and it had a harbour, then we would, in compliance with the *Style Manual*, say Pearl harbour. So how do we spell that great chunk of water by Fleet Base (East)? In strict compliance with the *Style Manual* it should be Sydney harbour (and the Americans would be justified in calling it Sydney harbor) because that is merely descriptive: We all know that the approved name of the waterway is Port Jackson and that Sydney Harbor is actually in Canada...don't we?



# THE LASER AIRBORNE DEPTH SOUNDER (LADS)

by

**Commander M.A.Hudson, MIS (Aust), RAN and Lieutenant P.R.Johnson, RAN**

Australia's area of charting responsibility covers some 11.5 million square nautical miles of sea and ocean. In general terms, it extends from the middle of the Indian Ocean to the mid Tasman and from the northern areas of Papua New Guinea to the Antarctic. Of primary concern, however, is the 660,000 square nautical miles of continental shelf of which, to date, only about 40% has been surveyed to either acceptable or temporarily acceptable standards. The task of completing this priority area using existing RAN Hydrographic units has been estimated to take up to 50 years.

The importance of accurate and comprehensive hydrographic data to commercial, naval and recreational users of our oceans has long been recognised. As part of its endeavours to speed up the surveying programme the RAN Hydrographic Service requested the Defence Science and Technology Organisation laboratories at Salisbury, South Australia, to investigate the use of an airborne laser to measure water depths.

## SYSTEM DEVELOPMENT

Trials were conducted over the period 1977 to 1984 to determine the feasibility of the Laser Airborne Depth Sounder (LADS) concept and to ensure that it would meet the requirements of the Hydrographer. Initial trials involved mounting a brassboard system in a Queenair Beechcraft aircraft. This configuration, known as WRELADS 1, was operated for 150 hours sampling data in South Australian and Queensland waters to test the potential for reliable depth measurement and laser operation.

Following the success of WRELADS 1, a more advanced system, WRELADS 2, was developed and fitted in an RAAF C47 aircraft. This configuration included a precise navigation

system, ARGO DM54, together with full scanning and data recording capabilities. Trials were conducted in South Australia, Queensland and West Australian coastal waters. Some 500 hours was achieved on-task culminating in a 90 square kilometre survey off Fremantle. This survey was completed in a single, 4 hour sortie with a data success rate of over 95% and achieved depths in excess of 50 metres.

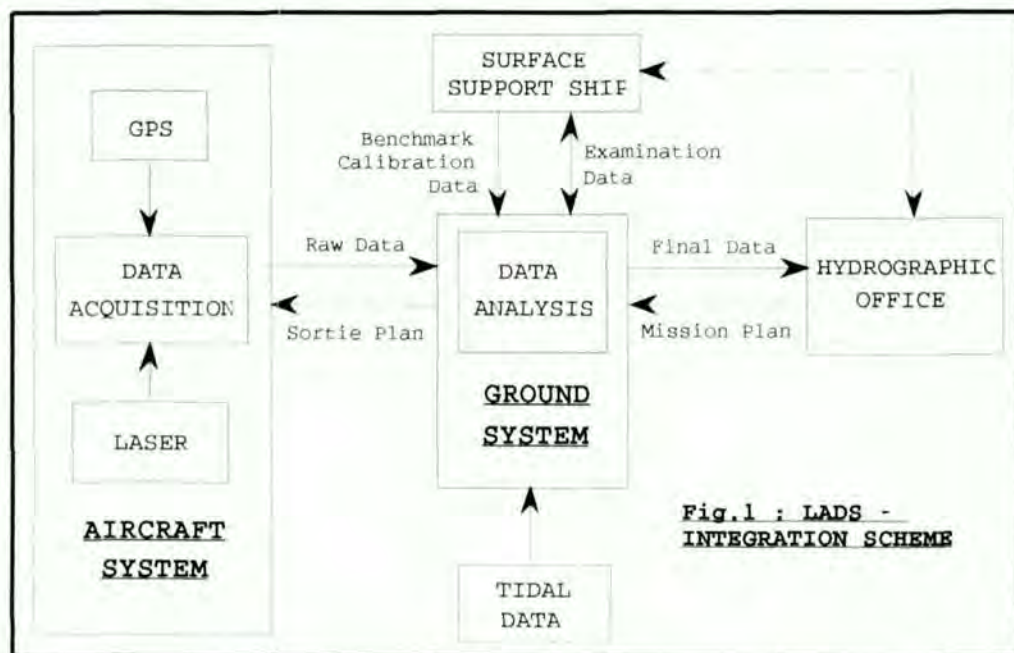
With trials complete, a Project Definition study was carried out with the assistance of industry to further define the proven concepts. Following the subsequent competitive tendering process, a contract to complete the detailed design, build and trial an operational LADS system was awarded to a consortium led by BHP Engineering Pty Ltd in May 1989. The LADS/conventional survey integration concept is shown in Figure 1.

## SYSTEM CONFIGURATION AND CHARACTERISTICS

### General Overview

In essence, the LADS system consists of laser transmit and receive elements mounted on a stabilised platform with associated navigation and data logging units in a Fokker F27 aircraft; together with an analysis system fitted in a mobile trailer to be deployed at each operational site. The laser emits infra-red and green pulses at a rate of 168 per second, the infra-red being reflected from the sea surface and the green from the sea floor. Depth is obtained by accurately measuring the time difference between the two reflections. Tidal adjustments are related to individual depths by time. The system is designed to operate in shallow continental shelf waters both day and night and to measure depths in the range 2 to 50 metres.





**Fig. 1 : LADS -  
INTEGRATION SCHEME**

Flying pre-planned tracks over the area to be surveyed at an altitude of 500 metres and a speed of 75 metres per second (approximately 145 knots), LADS records soundings spaced 10 metres apart in a rectilinear pattern 240 metres wide. This equates to an area coverage of 17,000 square metres per second or approximately two million soundings covering an area of 60 square nautical miles during a typical, four hour sortie.

### **Airborne System**

The Airborne System (AS) comprises all airborne components of LADS and includes the following:

**Aircraft** — An F27-500 with the necessary structural and system modifications to support the operation of the LADS airborne equipments. These include :

- provision of a fuselage mounted glass window and equipment bay to allow the transmission of laser signals to the ocean below and to provide a field of view for a video camera,
- provision of electrical power and cooling to the LADS airborne equipment,
- provision of inter-communication links and interface equipment, and

d provision of various crew and safety items.

**Laser Depth Sounder** (see Fig.2) — Designed to perform the following functions :

- Generate and direct to the sea surface vertically stabilised infra-red and, via a scanning system, green laser pulses capable of producing, when combined with the aircraft forward motion, a rectangular scanning pattern.
- Receive the returns from the sea surface and bottom and amplify the signals to a usable level.
- Provide a stabilised platform for the laser transmission and receiving equipment (pitch  $+6^\circ$  to  $+1^\circ$ , roll  $\pm 5^\circ$ , drift angle  $\pm 20^\circ$ )
- Provide a downward looking video camera on the stabilised platform.

**Airborne Data Acquisition** (see Fig.3) — The major functions of the Airborne Data Acquisition system are to :

- Acquire and record position and raw depth information collected from the GPS navigation system and Laser Depth Sounder.
- Allow the operator computer control of the airborne equipments and survey objectives with operator monitoring and interrupt facilities.



- c Determine the aircraft position and compare to the position requirements of the sortie plan; provide navigation correction signals to the aircraft autopilot and provide specialised navigation information to the pilot for manual flying.
- d Provide a colour video monitor system to allow the operators to view the sea surface and to carry out navigation checks using a bore sight. Graticule and system data is generated and added to the composite video signal which is viewed by the operators and recorded on the video recorder.

### Ground System

The Ground System (GS) is a mobile, computer based processing system which accepts raw AS data, tidal data and the mission plan to produce archival data reduced in density for the RAN Hydrographic Service Information System. In addition, the GS provides facilities to assist the surveyor in planning and reviewing the mission and individual sorties.

The main functions of the GS are to :

- a Enable the checking of navigation data.
- b Determine depth and position of soundings.

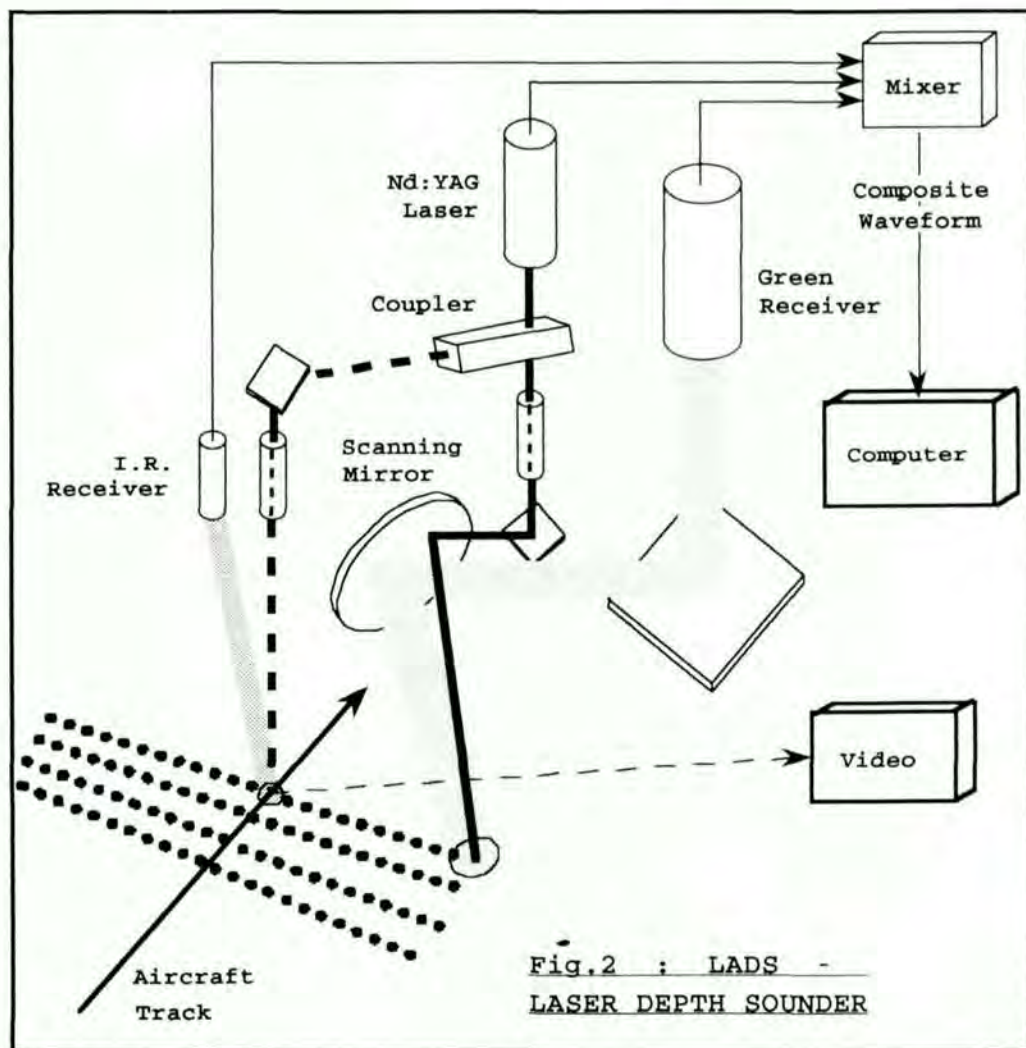


Fig.2 : LADS -  
LASER DEPTH SOUNDER



- c Reduce, select and validate soundings.
- d Plan and review mission activities.

**Ground Support Equipment** — Comprises two vans housing the GS and maintenance facility and an 8 tonne truck to carry power and cooling units for the aircraft. These vehicles are normally deployed by road utilising contracted prime movers, but are also capable of transport by sea and extra large transport aircraft. Sensitive equipment within the vans is protected by a sophisticated trailer suspension system, resilient mountings and specialised packaging of spares modules.

### System Accuracy

LADS is designed to achieve accuracies of at least :

- a **Depth** — over the range of depths from 2 to 30 metres within 1.0 metre at 2 Sigma. Accuracies beyond 30 metres are yet to be determined.
- b **Position** — to a resolution of 1 metre with an accuracy of  $\pm 15$  metres at 1 sigma. This is derived from two requirements :
  - i. Aircraft position determined to  $\pm 14$  metres using a GPS navigation system, and
  - ii. The position of all soundings relative to the optical platform to  $\pm 5$  metres

A time base relates position, depths, tide and video data. In practice, depth and positional accuracies have been demonstrated to be well within these figures; typically  $\pm 0.3$  metres in depth and  $\pm 11$  metres for position.

### System Limitations

Although the system is capable of detecting depths in excess of 50 metres this is dependant on water clarity. LADS is not currently programmed to log depths beyond 50 metres regardless of detection. Areas of high turbidity significantly degrade LADS performance and need to be identified as part of the survey planning process. In addition, reflected sunlight, particularly at high sun angles, causes unwanted reflections of light into the laser receiver and rough seas have the potential to increase water turbidity and

degrade the accuracy of the calculated mean sea surface (depth datum level). Low cloud, rain and strong winds can also provide difficulties for both the laser system and aircraft operations.

### Personnel

LADS is a unique unit within the RAN. System operators are provided by the RAN Hydrographic service and comprise one Lieutenant Commander (Charge Surveyor and Officer in Charge), two Lieutenants (Assistant Surveyors – Flight Survey Coordinators), two Petty Officers (Senior Survey Technicians – Flight Survey Operators) and one Leading Seaman (Junior Survey Technician – administrative support and tidal data coordination). Two flight crews, each comprising a Lieutenant and Petty Officer alternate duties, flying on one day and processing the gathered data the next. RAN personnel are based from the Hydrographic Office, Sydney.

Logistic support in the operating areas is provided by Contractor personnel who fly and maintain the aircraft, maintain all LADS systems, arrange domestic requirements and provide operator training for RAN personnel.

### Laser Safety

Considerable effort has gone into ensuring that the laser presents no danger to either the aircrew or others on the ground or in vessels overflown during survey operations. Laser safety aspects have been reviewed by the Australian Ordinance Council and fall within Australian Safety Standard AS 2211. In addition to laser safety courses for operators, measures to safeguard personnel include :

- a tailoring laser power to ensure that the system is inherently safe to the public (as a further safeguard, every endeavour is made to inhibit the system when overflying vessels at sea), and
- b automatic inhibit mechanisms which prevent the laser operating if the aircraft flies out of set altitude limits or being inadvertently operated on the ground.



## DATA ACQUISITION AND ANALYSIS

As indicated above, raw data in the form of position, time and depth are obtained from GPS and the Laser Depth Sounder. The logging, control and monitoring of this data is carried out by the AS as dictated by the flight survey crew.

### Acquisition

The laser consists of a neodymium doped yttrium aluminum garnet (Nd:YAG). This is Q switched to produce short duration output pulses at the rate of 168 per second. The laser transmits simultaneously short pulses of infra-red (1064 nanometres), giving a spot of 25 metres diameter on the sea surface, and green (532 nanometres), giving a spot 2 metres in diameter. The laser generated green beam "nods" through an arc of  $\pm 15^\circ$  about the vertical, while rotating along the axis of the aircraft to produce a rectangular pattern at the sea surface comprising rows of green pulses, transverse to the aircraft track, with a nominal spacing of 10 metres. The first and last sounding in each row are analysed to determine optical parameters of the water for validation and update of a bias model (required for correction of soundings) which limits depth determinations to the 22 intermediate soundings. Rows of soundings are repeated at a spacing of 10 metres along the aircraft track.

The vertically stabilised infra-red beam is used to establish a reliable sea surface datum. The surface model is calibrated through the green beam reflections from the surface, with appropriate filtering to accommodate beam inclination and surface roughness.

Variations in the nature of the bottom result in differing quality of the return pulses. In general, hard smooth bottoms provide the best return, while areas of thick weed, soft mud and other poorly defined surfaces degrade bottom reflections. In very shallow water the problem is to identify the bottom from the surface reflection, hence a 2 metre minimum depth. Practical effects of this minimum depth are overcome in most areas by "working the tide". Variations in salinity and temperature have minimal effect on

system performance.

Infra-red and green returns are amplified and summed. This composite waveform is then digitised to a 6-bit accuracy by a Biomation waveform recorder at 2 nanosecond intervals, corresponding to a depth increment of 0.22 metre. Between laser transmissions the waveform data is read out of memory using the infra-red surface reflection pulse as the principal timing reference. During this process a timing correction is applied to account for the additional slant distance travelled by the green pulse to reach the sea surface compared with the vertical infra-red reference pulse. After this the waveform (raw depth data) is recorded within the AS and tagged with position and time.

### Analysis

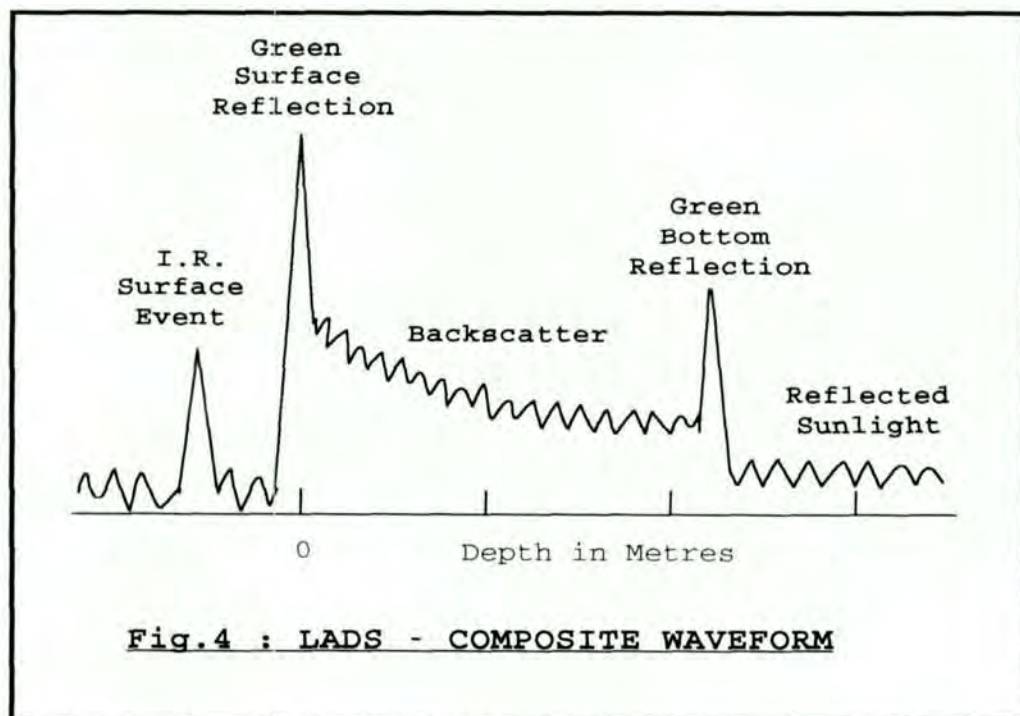
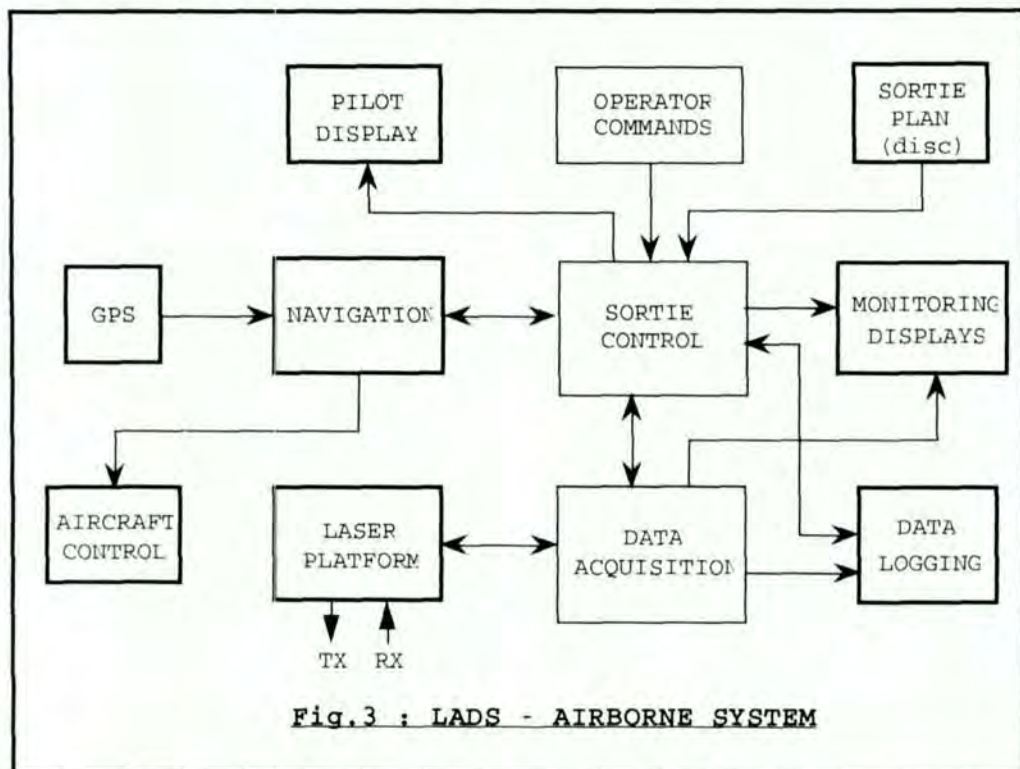
Analysis of data is carried out on the ground. In overview, the system carries out raw data processing, calculates soundings, corrects depth for tide, classifies this as Primary Data and stores it (see Fig.5). The system continues to reduce the number of soundings to the required survey density, classifies this as Secondary Data and stores it. The GS also has the function of planning subsequent survey sorties for transfer to AS in digital form on disc.

**Raw Data Processing** — This process unpacks and scales the data logged by AS on tape and stores it in the GS data base. At the same time, the converted raw data is analysed for initial error conditions such as discontinuities and error flags.

**Calculation of Soundings** — This function converts raw position and waveform data to soundings comprising position (expressed in geographics), depth and confidence vector. Depths calculated from the raw digitised waveform are corrected for :

- a system geometry — being a function of the scan angle, aircraft height, angles of the stabilised laser platform and aircraft heading, and







b depth bias – generated because individual light photons follow different paths in water. This is a function of sea depth, angle of the incident beam to the local vertical, turbidity and surface roughness. A bias model is continually being developed from analysis of trials data to correct for depth bias.

Confidence vectors for position and depth are applied to each sounding. These are a measure of the expected reliability of depth and position based on factors such as known turbidity, correlation between adjacent soundings, quality of the surface reflection reference, strength of the reflected pulse and position confidence gleaned from GPS data.

**Depth correction for tide** — This function corrects observed soundings for tide using a choice of tidal model within the GS. There are two prediction models – the Institute of Ocean Sciences model, for areas with comprehensive existing tidal data, and the Admiralty model, for areas with limited tidal data – and a co-tidal model with range factors and time differences. Tidal monitor stations are established in the survey area to provide observed data. The aircraft position in relation to the tidal stations is calculated to allow a height of tide to be obtained at the point of sounding.

**Classification of Primary Soundings** — Tracks actually flown are compared with those planned, soundings are classified by confidence vectors and performance analysed and presented graphically.

**Reduction to Secondary Data** — Primary Data is reduced on a swathe by swathe basis to the selected density. In conjunction with this process, the secondary soundings are reclassified with confidence vectors based on agreement with adjacent primary soundings, agreement with chosen secondary points, gradient of secondary points and the number of primary points in a given area around the secondary point that meet acceptance criteria.

**Classification of Secondary Data** — This process classifies each of the secondary soundings

according to its acceptability as final survey data. The classification defines the confidence vector of each depth in terms of its agreement with adjacent soundings and includes confidence data from the adjacent original Primary Data.

Apart from basic control commands, these processes are carried out “hands off”. The surveyor then has access to the system to select and validate soundings including the facility to edit the secondary depth values, select or delete Secondary Data and apply depth datum shifts under controlled circumstances. The validation process also allows the operator to produce sortie maps, reports and to sort data for resurvey by either aircraft or ship. The GS also carries out comparisons between LADS calibration runs and ship benchmark surveys.

## OPERATIONAL SCENARIO

### General Outline

LADS will deploy for three 90 day missions each year and, in general, be utilised for survey tasks in the northern areas of Australia while operating from bases such as Cairns, Townsville or Weipa. A hydrographic vessel is provided in support of each survey to conduct benchmark surveys to calibrate LADS, assist in obtaining tidal data, investigate areas of interest identified by LADS and assist in establishing GPS check points. The vessel is also used to conduct hydrographic surveys in those areas where LADS is unable to generate useful data ie. turbid water.

### Example Mission

A typical 90 day mission comprises five main phases :

- a Planning of mission activities including :
  - i. defining the area to be surveyed including areas of particular interest,
  - ii. identifying suitable navigation check points,
  - iii. researching turbidity and tidal data and identifying locations for tidal stations,
  - iv. arranging logistic support, and
  - v. developing an outline survey plan.



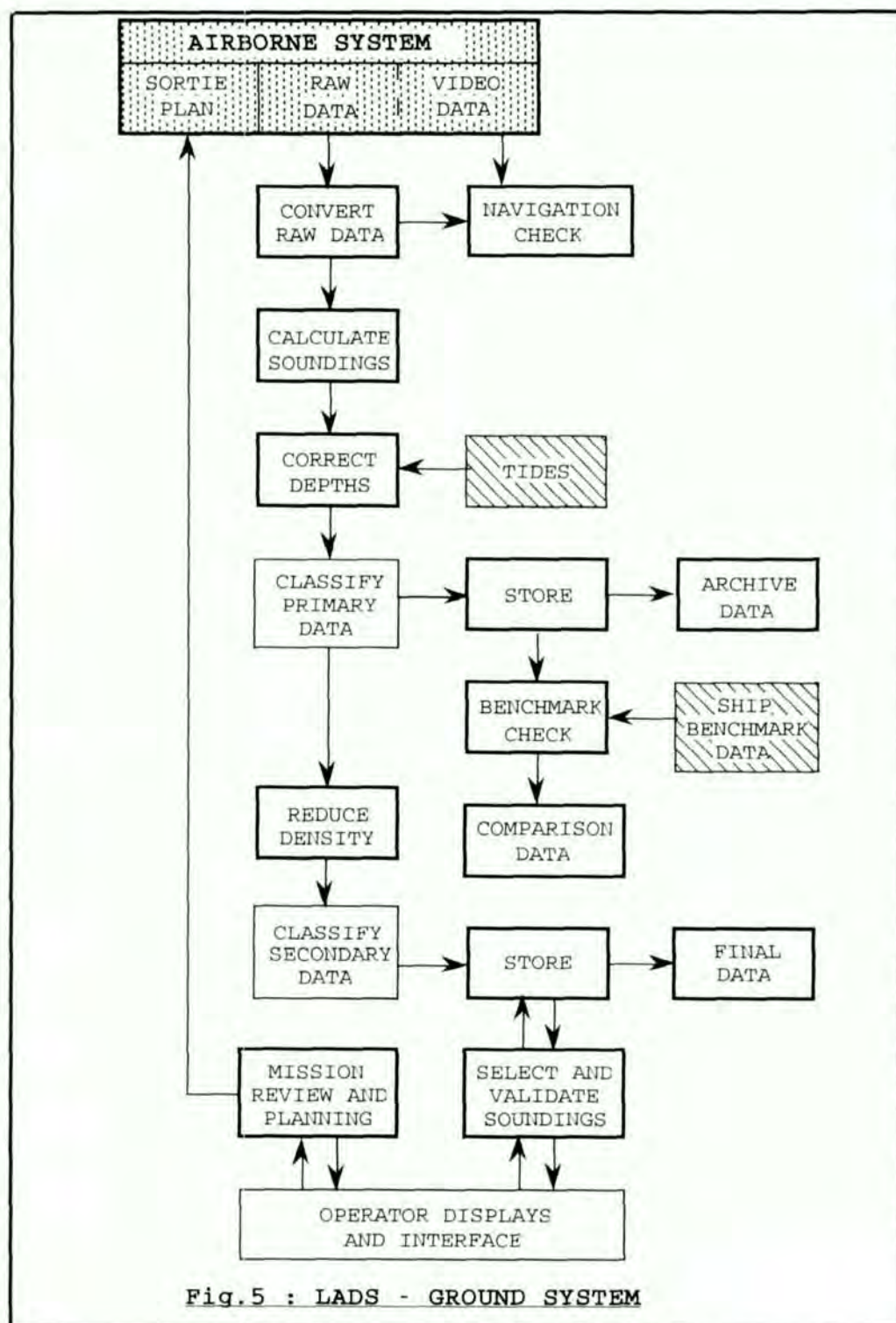


Fig.5 : LADS - GROUND SYSTEM



- b Deployment of all LADS equipment, personnel and the aircraft to the operating area.
- c Establishment of the various equipment and personnel elements in the operating area including preliminary calibration and reconnaissance flights. If required, a GPS navigation monitor station is located within the survey area.
- d Flying of survey sorties, analysis of data and investigations by the support vessel.
- e Pack up and return to base area.

### Example Sortie

During the course of a typical mission approximately 50 individual survey sorties are flown, each of about 4 hours duration. The aircraft endurance of 7 hours enables sorties to take place up to 300 nautical miles away from the operating airfield. Sortie planning takes into account the tide, weather and turbidity and, under certain circumstances, night flying is undertaken to extend system performance.

**Planning Phase** — Much of the sortie plan is developed on the GS. In this process each sortie objective is programmed and each survey objective detailed. Although the order of the sortie plan can be modified in flight, unforeseen circumstances or poor conditions in the chosen area normally result in the adoption of an alternative flight plan. The plan includes all navigation check points, a benchmark laser calibration run at the beginning and end of the sortie and the start and end coordinates of each sounding objective. Each individual objective is tagged with its own discrete number. Clearance of the flight plan with the civilian airfield authorities is the responsibility of the contract pilots in accordance with normal Civil Aviation Authority regulations.

**Survey Flight** (see Fig.6) — A pre-flight briefing covering survey and general topics is conducted prior to each sortie. After take off and before surveying commences, a navigation check is carried out by overflying a previously coordinated and well defined point which is recorded by the bore sighted video camera to ensure accuracy of

GPS. Once in the survey area a calibration run is carried out over a previously surveyed benchmark area to check the accuracy of depth measurements. These results are used to set a depth confidence qualifier for the sortie and refine the bias correction for the data conversion model.

### CURRENT STATUS

Production, the majority of which took place in Adelaide, is now essentially complete. An extensive trials programme commenced in October 1991 and LADS is expected to be accepted into RAN service in late 1992.

### CONCLUSION

LADS is as significant an event in the development of hydrographic surveying as the echo-sounder. Although there will always be the need for a ship "on the ground" to investigate anomalies and conduct deeper water surveys, many previously inaccessible areas, such as reef strewn waters, can now be surveyed in relative safety and at great speed.

### ACKNOWLEDGEMENTS

**LASER AIRBORNE DEPTH SOUNDER SYSTEM PRODUCTION DATA PACKAGE.** Various Authors. Department of Defence (Navy) and DSTO Laboratories, Salisbury, S.A. (Surveillance Research Laboratory).

**AIRBORNE LASER HYDROGRAPHY IN AUSTRALIA.** 1985. M.F.Penny, R.H.Abbot, D.M.Phillips, B.Billard, D.Rees, D.W.Faulkner, D.G.Cartwright, B.Woodcock, G.J.Perry, P.J.Wilsen, T.R.Adams and J.Richards.

**APPLIED OPTICS**, Volume 25, Number 13, 1 July 1986. A collection of 7 papers covering Australia's R & D programme in Laser Hydrography.

Discussions with Mr M.F.Penny, Technical Manager, Laser Airborne Depth Sounder Project Technical Cell, (DSTO Laboratories, Salisbury, S.A.).



## BIOGRAPHICAL

Commander Mark Hudson joined the RAN in 1970 and, after completion of formal Naval training and some service in "grey" ships, specialised in Hydrography in 1978.

He has served in HMA Survey Ships *Moresby*, *Flinders* (twice), *Cook* and was the first Commanding Officer of a landing craft converted for survey work, HMAS *Betano*. Commander Hudson also spent a year as Commanding Officer of the Fijian Navy's survey vessel *Ruve*.

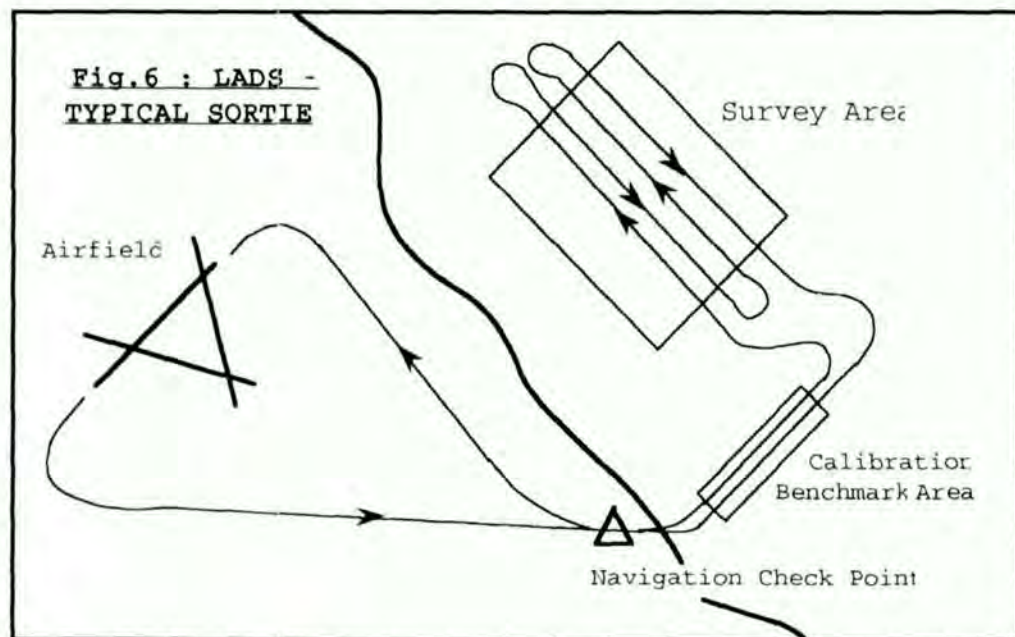
Since 1987 he has been the "customers" representative on the LADS Project.

Commander Hudson is a Member of the Institution of Surveyors (Australia) and, in 1983, was Dux of the Royal Navy's Long Hydrographic Course.

Lieutenant Peter Johnson joined the Royal Navy in 1970. Following service in destroyers, frigates and surveying ships, he was commissioned as a Hydrographic Surveyor in 1978.

He has served in nine Royal Navy survey vessels operating in the West Indies, Mediterranean Sea, Indian and South-West Pacific Oceans and on the UK continental shelf. Between 1984 and 1986 he was Commanding Officer of the Fijian survey vessel HMFS *Ruve*.

After transferring to the RAN in 1989, Lieutenant Johnson was Senior Assistant Surveyor in HMAS *Moresby* prior to joining the LADS Unit as Second in Command and Flight Survey Coordinator in May 1991.





## THE GERMAN NAVAL COLONY: GERMAN CHINA 1898-1914

by Rev. M A Head

It all finished on the quiet morning of 14 March 1915 at the island of Juan Fernandez - of which only the avid readers of Swift had ever heard<sup>1</sup> — the end of German Kreuzer Geschwader.

It had began in the Far East after the Treaty of Nanking when the first German traders appeared, usually as employees of British Companies. The Germans were tolerated and treated as "friendly aliens" by the British consuls in the frequent disputes which arose with Chinese officials. This was due to the minor but still important part Hamburg and Bremen and the Hanse ports played in British world trade. They were the points of access to the markets of central Europe. Consequently the German trading houses could benefit from the British colonial trade without the risks or expense of colonial conquests themselves.

However Prussia was engaged in a conflict with Austria for the leadership of the German Confederation and presented itself as the proponent of German overseas trade expansion. Therefore, partly to support this claim, it sent four warships to China in 1859 to support the Prussian envoy Count Friedrich Eulenburg. Eulenburg managed to get from the Chinese the same advantages for trade that the British, French, Russian and Japanese traders enjoyed. It was successfully extorted from the Chinese by a mixture of bluff and empty threats as the officials had probably never heard of Prussia, much less the German Zollverein or the Grand Duchy of Mecklenburg-Schwerin. The formal treaty was signed at Tientsin on 2 September 1861.

The German states therefore, a decade before the foundation of the German empire, had joined the other European powers in what is sometimes referred to as the "semi-colonial" subjection of China. It was a trade based subjection, supported by very low prices paid for Chinese goods and the high prices charged for European goods. In

the case of the British it also involved the extensive sale of opium. It had begun in 1842 and would continue until virtually the end of the century.

The treaty of 1861 opened the way for German Imperial penetration later, but for the moment Bismarck or the German commercial, financial or industrial interests were not at all interested in colonial expansion, a situation which would last until the change in German direction in 1877-78. The most the Prussian or later German governments desired was a small coaling station for warships in Far Eastern waters. The German minister in the *von Rehfues* was ordered to negotiate such a station in 1869 but the Chinese resisted and then the war with France put a temporary hold on the project. A colonial question did not exist.

The end of the war with France created the opportunity for Prussia to seize a few of the French colonies, such as Chochin China. However Bismarck firmly rejected the idea as he was determined to avoid any conflict with Britain which might improve Anglo French relations. In fact he cultivated and supported French and Russian colonial expansion on the grounds that it would cause conflicts with Britain.

German interests in Peking were from 1875 to 1893 represented by Max von Brandt, a noisy, belligerent character with limited skills in diplomacy who became known amongst the European communities in China as the "blood and iron minister". Von Brandt was not as successful as he would have like to have been but he certainly saw the opportunity to develop the German trade in China and persistently campaigned for the creation of a German bank and Government supported shipping lines for Far East Trade.

In 1876 the German schooner *Anna's* Chinese crew mutinied and killed the German captain and



his first mate. Von Brandt reacted by placing a whole lot of demands to Chinese officials which had more to do with the increase of trading opportunities than with the suppression of piracy. He gathered six warships and 1,380 men near Hong Kong to support his demands. The other powers joined in the protest to try and stop things getting out of hand and gathered considerable naval forces at Chefoo in August of 1876. On September 13, the Chinese signed a Convention which gave some more minor concessions to the European powers. It was however the first time German naval forces had caused the creation of an internal force in any form in world affairs.

Von Brandt landed detachments from warships twice more in the later 1870s to deal with conflicts between German traders and local petty officials in southern China. This did not meet Bismarck's aims for the retention of good relations with China and von Brandt was recalled for a short time in 1883. He was still there when the Franco-Chinese war (1883-85) broke out and Bismarck supported the French conquest of Tonking.

However the rejection of colonies did not entail any rejection of trade expansion and heavy industrial products were in the forefront. Particularly successful was the armaments firm of Krupp which managed to sell vast amounts of artillery to the Chinese government in the years before the Sino-Japanese war (1894-95). There was always the possibility of these modern guns being used against the original suppliers and it is a little ironic that Krupp batteries fired on German forces landing at Tientsin in 1900. Other exports included woollen goods, dyestuffs, metal ware, glassware, stationary and toys. It imported tea and spices, and raw materials for German industry. In spite of the expansion of German trade in China in the years before 1900, it never really exceeded 1% of Germany's total exports. Strangely Germany's major trading partner was Great Britain.

However attitudes were changing at home and in the Navy. The cruiser squadron generally consisted by 1890 of three steam/sail cruisers or sloops with a fourth unit located on the Australian Station (East Indies?). In addition two gunboats

were normally with the Asiatic squadron. The sails were necessary as coal was sometimes difficult to obtain. (During the Sino-Japanese War it was briefly cut off altogether.) For maintenance and repairs the squadron depended upon the Japanese in Nagasaki or the British in Hong Kong. But after 1890 the young Kaiser wanted to build a more impressive navy, the *Jeune école* school of cruiser-warfare gained some popularity in naval thinking and technological change forced the transition from sail to steam making coaling stations vital.

Generally the Germans deployed small gunboats in the region, supported by one or two larger vessels such as the 2169 ton corvette *Olga* lost in the famous Samoa Typhoon of 1889. Typical of the ships built specifically for foreign service were the 1600 sloops of the *Seeadler* class in the early 1890s. They were coal fired but could be barque rigged as well, and were the last of quite a long line of sloop type vessels to serve in the early German Navy. Two of the class, *Kormoran* and *Geier* were still in the Pacific when war struck in 1914.

Where possible the German Navy tried to provide a cruiser as flagship for the squadron. The pleasant looking 6,000 ton protected cruisers (Kaiserin Augusta class) did foreign service from soon after completion in 1892 until 1902.. At least three of the *Viktoria Luise* class 5,800 ton protected cruisers, (*Hertha*, *Hansa*, and *Vineta*) were deployed on foreign stations from about 1900, until the last unit was recalled in 1906.

The large armoured cruiser *Furst Bismarck* did foreign service until 1909 and it seems that the *Prinz Heinrich* was built with foreign service particularly in mind. When deployed, *Bismarck* was the most powerful cruiser in the German navy.

Smaller cruisers took over the work of the sloops during the first decade of the century. *Gefion* was abroad in 1901/04 and *Hela* 1900/01. *Gazelle*, *Niobe*, *Thetis* and *Arkona*, all did some service between 1902 and 1910, while *Bremen* served a long period, 1904 to 1914 and *Berlin* did little more than a brief world cruise in 1911. These



ships were replaced by the units that would never return.<sup>2</sup>

Because of this changing technological situation with its greater dependence upon coal, it is often argued that Kiautschou was acquired mainly for military reasons. This is not entirely true. For although the Navy had specific naval goals in mind for Kiautschou it was more important that it shared common interests and goals with the German commercial classes. It did so because it believed in the goals of these groups and valued the political support they could give on general naval issues. From the very beginning the navy insisted that whatever base Germany acquired that it could be capable of being developed into a major port which had a hinterland capable of intensive economic development. More important it wanted the new colony to be run by the navy and not the colonial office.

For internal political reasons the German colonial office was part of the Foreign Office and it appeared to be administer colonies for political and to a lesser degree their military value and not for their economic or commercial significance. Whether that assessment is true or not, it did enable an alliance between the liberals in politics and the navy to ensure naval control of the German colony.

However it is always open to misinterpretation to talk of the naval position as being one opinion. On 30 March 1889, the Kaiser abolished the German Admiralty and created three equal and generally conflicting departments. The *Reichsmarineamt* (RMA) responsible for the administration and technical advancement of the Navy, the *Oberkommando der Marine* (OKM) responsible for the operations and training programmes of the navy, and the *Kaiserliches Marinekabinett* (MK), the Imperial Naval Cabinet which controlled promotions, personnel and advised the Kaiser on matters of naval policy. Now if cruiser-warfare was to be a key strategy in a modern conflict then major naval bases around the world were needed. However the heads of OKM and MK and after Tirpitz reached the RMA in 1897, all supported the battleship construction programme. Still cruiser-warfare

was the flavour of the month and its popularity remained for sometime.

Admiral von Hollmann who had preceded Tirpitz wanted a pair of bases and suggested either Chusan Islands (near Shanghai) and Amoy, Kiautschou Bay and Mirs Bay (near Hong Kong) or the Montebello Islands (near Korea) and the Pescadores. At the time it was believed that Kiautschou was ice-bound in winter and all the others either had no hinterland or were firmly in the spheres of influence of the other major powers. They were all rejected.

The Kaiser wanted action and after the murder of two missionaries at Swatow in September 1895 he ordered the Cruiser Squadron to seize Weihai-wei. However the squadron was scattered and could not be gathered in time. Besides Weihai-wei was hemmed in by mountains and did not meet the navy's requirement for an economic hinterland.

In early 1896 Rear Admiral Tirpitz went to China to take command of the cruiser squadron. He surveyed the alternatives and reported to Berlin on 5 September that Kiautschou was the only option available and he particularly emphasised the commercial possibilities of the area. The Germans called for expert advice and the famous German Geographer Ferdinand von Richthofen claimed Shantung province was the area, while Georg Franzius, director of the harbour works of Kiel on tour of the Far East in January 1897 agreed about the harbour's potential. But then in June 1897 Tirpitz was recalled to take charge of the RMA and the battleship programme became the official one. It was the end of the cruiser-warfare strategy, indeed if it had ever started.

However was Tirpitz being duplicitous in recommending the Far East Base? No further armed bases were created anywhere in any other German colony. German commercial interests in the Far East political scene demanded that a naval presence be maintained. The difficulties of keeping a squadron half a world away from home were obvious and a local base was an eminently sensible solution.



However the foreign office was still worried as there were objections and problems with the Russians and possibly with the British and Japanese. Then on 30 of October a Chinese mob in Wuchang threw rocks at crew members from the small cruiser SMS *Cormoran*. Vice-Admiral Otto von Diederichs pressed for action. Tirpitz was worried, less action in China might jeopardise the passing of his Navy Law.

He didn't need to worry. Since 1879 the Steyl Catholic Missionary Society had operated in Shantung province. Their chief, Bishop Johann Anzer was eager to gain a German Colony for the province. Tirpitz's need to gain support from the Catholic Centre Party created another alliance of strange bedfellows. Then on 1 November Fathers Nies and Henie of this same Catholic Steyl Missionary Society were martyred in their sleep in a small Shantung village. It took some days before the news reached Berlin.

Meanwhile the Kaiser had ordered von Diederichs to seize Kiautschou. But the OKM joined Tirpitz and the RMA, the Chancellor and the Foreign Secretary in trying to persuade the Kaiser to revoke the order. Reluctantly he agreed. However von Diederichs had already sailed and was out of cable contact. On November 13 he sailed into Kiautschou Bay and next day landing parties went ashore. Much to the relief of the German government it went smoothly and there was little violence. On November 15, the German Government decided to make the occupation permanent. The 3rd Naval Infantry Battalion and three more cruisers under Rear Admiral Prince Heinrich were despatched.

There was no reaction from the other powers. Japan was still absorbing her successes from the Sino-Japanese war, Russia was concerned about Port Arthur which it leased on 27 March 1898 while Britain was more worried about the Russians and took over Wei-hai-wei for as long as the Russians were to remain in Port Arthur. China was unhappy but was forced the following March to sign a treaty which made Kiautschou a German colony like Hong Kong, and opened up Shantung province as a special German economic preserve.

Tirpitz was particularly keen that the new colony be administered by the Navy. This would popularize the cause for colonies and colonial empires needed navies and an economically successful colony would be popular with his supporters in the commercial interests. Tirpitz had little difficulty in resisting the claims of the colonial office for the administration, but more problems with the dispute over whether OKM or RMA should run it. Eventually he got his way and Captain Rosendahl took over as military governor on 15 April 1898.

Kiautschou was to be a model German colony in every way. Vast amounts of money, (two hundred million marks by 1913) were spent on its development. They got what they wanted, a model colony.

The government established advisory councils of Germans and Chinese residents. The civilian administration took Chinese needs into account. It was divided into two Geographical zones, the urban and rural. In the latter exploitation was prevented and regular interference with Chinese custom kept to a minimum. The urban population of Tsingtao grew from a few thousand to 55,700 in 1913. The rural zone increased by over 60%.

The navy established an interesting system of taxing and control over real estate. This controlled development, provided a reliable flow of inexpensive development sites and blocked unnecessary speculation. Strict guide-lines controlled development of the city with zones for industry, commerce, housing and recreation. It became one of the outstanding planned cities of the early 20th century.

Under the taxation system all land purchased from Chinese was done by the government. It was then put up to public auction. Penalties were imposed to make certain the land was used for the declared purpose. Owners paid a yearly land tax of 6% on the current value. If the land was resold, the government taxed the net profit at 33 and a half percent. If the land remained in the same hands for more than 25 years, a special levy of 33 and a half percent was imposed. It was the brain-child of Wilhelm Schrameir and worked on the



principle that the value of the land did not increase by anything the owner did, it was due to actions of others, the government or the community. As a result Tsingtao was spared the land speculation that so crippled other Chinese developments and many other colonial schemes.

An extensive programme of re-forestation and erosion control was introduced, programmes decades ahead of much of the world. Good social services and health care programmes were created in an interesting alliance between the three missionary societies and the government. Extensive health and hygiene regulations were introduced, including things such as street cleaning, and a special police force was created to enforce them. Quite stringent building codes were introduced as well as piped water supplies and sewerage systems.

Education was an important consideration and Tirtiz's favourite project was the Deutsch-Chinesische Hochschule for Chinese students. The upper part of this college was really a university with faculties in commerce, engineering science, agriculture and medicine. There was really nothing like it anywhere else in China.

Tsingtao was transformed into a first class port with railway connections running into the interior. Plenty of docks were laid down and there were excellent navigation aids. The docks both built and repaired ships. By World War I it was claimed to be the best port in the whole of China. The government paved the streets, built a network of roads into the rural zone, set up a post office, a telephone system, telegraph cables and a wireless station. By 1904 the railway from Tsingtao reached the provincial capital of Tsinan cutting a 12 day journey to a matter of hours. By 1914 it was the 6th most important port in China. (By 1931 it was 4th.)

However as an economic investment the whole project was a failure. Initially the railway, two mines and the presence of naval troops in the interior signalled success. Then after the Boxer Rebellion local and international pressures combined to halt the race. China was becoming

increasingly nationalistic and was resisting the German influence at every opportunity. Germany had large investments in various other parts of the country and wanted to retain good relations with the Peking government less those be endangered. In 1902 the foreign office gained control of the Shantung area from the navy. It was much more willing to sacrifice interests in the region for gains in other areas than the navy had been. It was also the start of anti-German feeling in Britain where their operations in Shantung were used as ammunition in disputes. The German isolation began too with the Anglo-Japanese treaty the same year and the Russo-Japanese war two years later. In addition in Germany support in political circles for the whole project in Shantung declined as the Centre Party moved into coalition with the Progressives and Social Democrats.

Kiautschou was still a German colony but the sphere of influence was all but gone by 1907. Principally the Germans never managed to get a return on their development projects. The modern coal mines which employed over 8,000 Chinese miners by 1911, were bankrupt and closed in 1913. Only small companies survived, — one of the best was the brewing company. The navy was never able to get a private concern to run the dockyards or ship servicing facilities. They stayed an unprofitable naval commercial enterprise.

In the commercial field, the German share of business through the port was not much different than in any other major port in China. In 1907 the Japanese trade accounted for about 50% of the traffic, the British over 20%, the USA about 15% and the Germans slightly less. By 1914 it was down to about 8% about the same as Germany's share of the total China trade.

Tsingtao was a successful port and the navy was pleased at the number and range of companies that came and established business there. But Germany got little from all this except possibly some more trade for the Hamburg Amerika and Norddeutscher Lloyd shipping companies. However these companies were quite powerful enough to stand on their own.



But when all said and done, Tsingtao was a naval base and in spite of Tirpitz's emphasis on commercial possibilities it still was the principal reason that the Kaiser and the OKM supported the seizure. It gave the Cruiser Squadron somewhere to winter and an assured coal supply.

What did the Germans do with this new naval independence? In reality, not very much. In 1898 the Kaiser ordered von Diederich to take the cruiser squadron to Manila Bay. The orders were vague and resulted in a stand off with Admiral Dewey who was blockading Manila and could have easily come to war. It achieved only worsening relations with the USA. In December that year the Germans purchased the Mariannas and Caroline Islands from Spain. They could have had some strategic value but they had no real commercial value.

When the new Chinese nationalism blossomed into the Boxer Rebellion the Germans sent fifty troops to help defend their Peking Embassy. It was not very successful as the murder of the German minister there signalled the start of the siege of the legations. The relief expedition under the British Vice-Admiral Seymour included a force of over 500 officers and men with two machine guns under Captain Usedom, from the cruiser *Hertha*. It was stopped just outside of Tientsin in June.

The great powers now gathered warships to the scene more to impress each other than the Chinese. The USA, Japan and France each sent one battleship, the British, three, and the Russians a total of five. The Kaiser collected his first division of battleships, the four large and new Brandenburg class ships with several cruisers and minor war vessels under the command of Rear-Admiral Geissler and sent them to China. The voyage of five weeks via, Gibraltar, Port Said, Aden, Colombo and Singapore emphasised the German dependence upon the British coaling stations. They were too late for any action as Peking fell to the relief forces on 14 August 1900 so the crews spent some delightful months enjoying the hospitality of the China coast.

However the fact the squadron arrived so quickly

and in fighting form was not lost on the Japanese, and acted as a further stimulant if any was ever needed, to accelerate the signing of the Anglo-Japanese treaty. It makes an interesting comparison with the Russian Second Pacific Squadron in 1904. (Was it the only time a German battle-squadron ever breasted the Pacific?)

The military value of Tsingtao was pretty close to nil in a major European war. Tirpitz was correct in saying the issue would be decided in Europe. It was not a base for cruiser-warfare. This lesson had been driven home at Wei-hai-wei in the Sino-Japanese War, in Santiago during the Spanish-American War and again in Port Arthur during the Russo-Japanese War. The acquisition of Kiautschou had to do with the commercial interests and difficulties of the China Trade. It was garrisoned by about 2,300 men and two forts and some smaller batteries had been built there, but no additions were made after 1906. The ships and the colonies were to resist as long as they could, but their fate if the war in Europe was not brief, was certain.

When war did break out, Vice-Admiral von Spee took his cruisers to sea to avoid being trapped at Tsingtao. The British and Japanese blockaded the harbour and landed an army to invest the city. Inside the old cruiser *Cormoran*, the destroyers *S.90* and *Taku*, the gunboats *Ilris*, *Jaguar*, *Luchs* and *Tiger*, and the old Austrian cruiser *Kaiserin Elisabeth* were scuttled. In some cases their guns were landed to help in the defence of the city and the *S.90* torpedoed and sank a Japanese cruiser. Pointlessly the Anglo-Japanese forces shelled the city. The Governor, Captain Meyer-Waldeck surrendered on 7 November.

The other ships of the Cruiser Squadron, *Otter* and *Vaterland* were interned in Nanking, Tsingtao in Whampoa and the small cruiser *Grier* in Honolulu. The survey ship *Planet* was scuttled at Yap and the *Komet* was captured by the Australians.

Kiautschou was a model colony in exactly the way Tirpitz and the navy intended it to be. It failed commercially because of circumstances outside of the navy's control, and it died in the



way they all knew it would when events for which it was not designed overtook its history.<sup>3</sup>

## FOOTNOTES

- <sup>1</sup> Claimed to be the island home of Robinson Crusoe.
- <sup>2</sup> Plenty of sources for this material. eg. J.C. Taylor, *German Warships of WWI*, Ian Allan 1969.
- <sup>3</sup> There are many books written about the fall of German China. One of the best is probably John E. Schrecker

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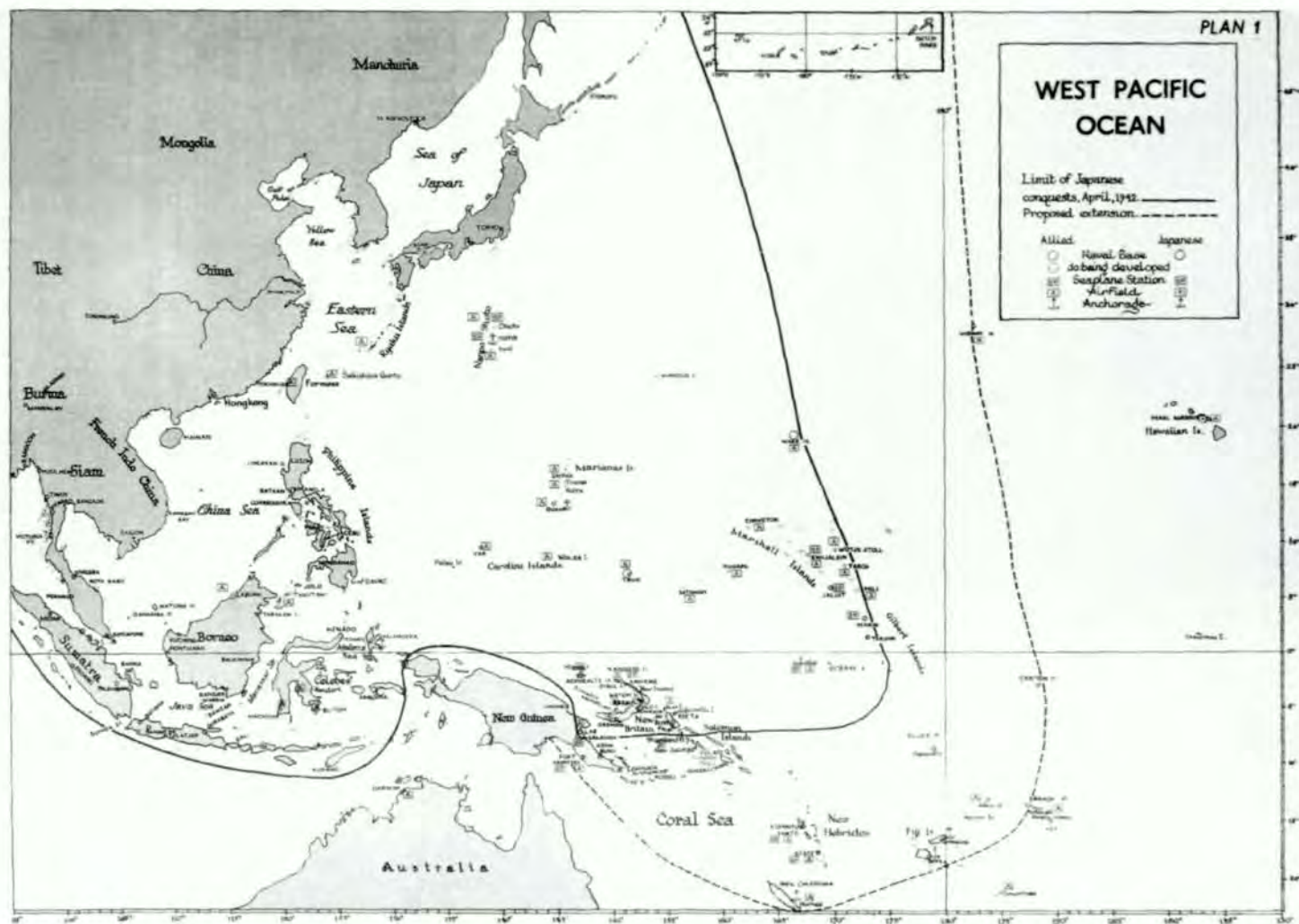
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## OPERATION "MO"

by

Jozef Straczek

### The Basic War Plan

On 2 December 1941 Admiral Nagano Osami, Chief of the Naval General Staff, signalled Admiral Yamamoto Isoroku, Commander-in-Chief Combined Fleet, that hostilities would commence against America, Great Britain and the Netherlands on the 8 December 1941 (Tokyo time). Some time prior to this the Japanese had developed The Basic Plan for the Greater Asia War. This plan was broken into three phases:

- 1 The seizure of the Southern Areas which are rich in resources; the attack on the United States Fleet in Hawaii, and the seizure of strategic areas and positions for the establishment of a perimeter for the defense of the Southern Resource Area and the Japanese Mainland. The area to be seized was that within the line which joins the Kuriles, Marshalls (including Wake), Bismarcks, Timor, Java, Sumatra, Malaya and Burma.
- 2 Consolidation and strengthening of the defensive perimeter.
- 3 The interception and destruction of any attacking strength which might threaten the defensive perimeter or the vital areas within the perimeter. Concurrently with intercept operations the activation of plans to destroy the United States will to fight.<sup>1</sup>

The Japanese planners had originally allowed approximately five months for the completion of the first phase of operations. However, as a consequence of the relative ease and speed with which the first phase operations were being conducted discussions had commenced between the Army and Navy as to the direction of future strategy. "The Army favoured a defensive strategy"<sup>2</sup> whilst "the Navy wanted to follow the advantages gained in the early successes by more vigorous operations, ideally against Australia"<sup>3</sup>. The proposals to attack Australia were rejected

by the Army as taking up too many resources. Furthermore, the Army "wanted to withdraw 200,000 troops from the 400,000 deployed in the South since the outbreak of war, in anticipation of a spring offensive against the Soviet Union".<sup>4</sup> Throughout the war the possibility of the Soviet Union attacking Japan was considered a real threat by the Japanese.

The Naval Staff and Army eventually agreed on a compromise plan which would involve the invasion of New Guinea and the capture of Port Moresby and Tulagi. The latter two phases being designated Operation MO. However, Admiral Inouye Shigeyoshi, commander of the Fourth Fleet and the man responsible for the later two operations, decided to delay the operations against Tulagi and Port Moresby until he was provided with carrier support.

By April the Japanese were again examining the possibility of further expanding their plans to include, not only the delayed Port Moresby and Tulagi operations but also the capture of New Caledonia, Fiji and Samoa. The object of this plan was to extend and strengthen the defensive perimeter as well as cutting the lines of communication between Australia and the United States. The occupation of Port Moresby by the Japanese would not only cut off the eastern sea approaches to Darwin but provide the Imperial Japanese Navy with a secure operating base on Australia's northern door step.

At the same time that the Naval Staff were examining options for further operations the planning staff of the Combined Fleet were doing the same. Though their objectives were different. In early April 1942 the staff of the Combined Fleet had presented the Naval Staff with a proposal



for the invasion and capture of Midway Island. By this action it was hoped that the American Fleet would be enticed "into an ambush where they [the American Fleet] could be annihilated by overwhelming numbers"<sup>5</sup>. In essence Admiral Yamamoto was hoping to repeat Admiral Togo Heihachiro's victory at the Straits of Tsushima in 1905. After much haggling the two staffs agreed to go ahead with the Midway operation after the capture of Port Moresby, (Plan 1<sup>6</sup> shows the intended extension of the defence perimeter). However, planning progressed slowly until the 18 April when B25 bombers led by Lieutenant Colonel James H. Doolittle attacked targets in the Japanese Home Islands.

The military value of this raid was minimal, "but its psychological effect on the Japanese was all that might have been desired. The army and navy had failed in their duty to safeguard the homeland and the Emperor from attack. Admiral Yamamoto regarded the raid as a mortifying personal defeat."<sup>7</sup> As a result of this first air raid on Japan the Midway operation took on greater importance and Admiral Inouye was instructed that the Port Moresby operation was to take place in early May with the Midway operation planned for the following month. "The generals and admirals had suffered a tremendous loss of face, and their angry over-reaction eventually brought a succession of strategic disasters".<sup>8</sup>

Had the Doolittle raid not occurred there is the real possibility that the majority of the Japanese aircraft carriers may have been involved in Operation MO, the aircraft carrier *Kaga* (72 combat planes) was originally allocated to take part in the operation but with the advancement of the timetable she had to be omitted as she was in dockyard hands till late April 1942. As it was Admiral Inouye still had the aircraft carriers *Shoho*, *Shokaku* and *Zuikaku*. After completion of Operation MO the later two were to rejoin the rest of the fleet and take part in the planned operations against Midway Island.

### The Japanese Plan

In concert with other Japanese plans the plan for Operation MO "was highly complex...and it

suffered from the weakness of all such plans in that it divided forces and objectives."<sup>9</sup>

The Japanese plan was to seize the islands of Tulagi in the Solomons and Deboyne off the east coast of New Guinea. The intent was to use both islands as bases for flying boats which would then conduct patrols into the Coral Sea in order to protect the flank of the Moresby invasion force. The Japanese also believed that they would be denying the Americans the use of these islands for the same purpose. The Moresby occupation force would sail after the capture of Tulagi on 3 May. As the Moresby occupation force entered the Coral Sea from the north it would be covered by the Carrier Striking Force which had entered the Coral Sea from the direction of the Solomon Islands. Prior to implementation, the operation was expanded to include the seizure of Ocean Island and Nauru after the capture of Port Moresby.

Admiral Inouye, Commander of the Fourth Fleet, based at Rabaul had overall command of Operation MO. His forces were divided into several major groups:

- **Tulagi Invasion Group**, commanded by Rear Admiral Kiyohide Shima, consisting of minelayers *OKINOSHIMA* and *KOIE MARU*, two destroyers *KIKUZUKI* and *YUZUKI*, the transport *AZUMASAN MARU*, submarine chasers *TOSHI MARU No3* and *TAMA MARU No8* and the mine-sweepers *No1*, *No2*, *HAGOROMO MARU*, *NOSHIRO MARU No2* and *TAMA MARU*. This force was to capture the island of Tulagi.
- **Support Group**, commanded by Rear Admiral Kuninori Marumo, consisting of the light cruisers *TENRYU* and *TATSUTA*, a seaplane transport *KAMIKAWA MARU* and the gunboats *KEIJO MATU*, *SEIKAI MARU* and *NIKKAI MARU*. This group was to establish a seaplane base in the Louisiade Archipelago.
- **Carrier Striking Force**, commanded by Vice Admiral Takeo Takagi, consisting of the aircraft carriers *ZUIKAKU* and *SHOKAKU*, heavy cruisers *MYOKO* and *HAGURO*, the destroyers *ARIAKE*, *YUGURE*, *SHIRATSUYU*, *SHIGURE*, *USHIO* and



*AKEBONO*, and the oiler *TOHO MARU*. This group was intended to provide long range cover for the operation by intercepting and destroying Allied warships.

- **Attack Force**, commanded by Rear Admiral Sadamichi Kajioaka, consisting of the light cruiser *YUBARI* and the destroyers *OITE*, *ASANAGI*, *UZUKI*, *MUSUKI*, *MOCHIZUKI* and *YAYOI*. This group was to support the Transport Group and command the assault phase of the operation at Port Moresby.
- **Transport Group**, commanded by Rear Admiral Katsuo Abe, consisting of 5 Navy and 6 Army transports, the repair ship *OSHIMA*, the oilers *GOYO MARU*, *HOYO MARU* and *IRO* (at anchor at Shortland Is). These ships were escorted by the minelayer *TSUGARU*, Fleet Mine-sweeper No 20 and mine-sweepers *HAGOROMO MARU*, *NOSHIRO MARU* No2 and *FUMI MARU* No2. The Moresby invasion troops were in this group.
- **Main Body Support Force**, commanded by Rear Admiral Aritomo Goto, consisting of the light carrier *SHOHO*, heavy cruisers *AOBA*, *KAKO*, *KINUGASA* and *FURUTAKA*, and the destroyer *SAZANAMI*. This force was to provide protection for the Attack Force and Transport Group.
- **Submarine Force**, commanded by Captain Noboru Ishizaki and consisting of the submarines I 21, I 22, I 24, I 28, I 29, RO 33 and RO 34. This group was to provide warning of the movement of Allied warships in the southern Coral Sea.

Land based aircraft, under the command of Rear Admiral Sadayoshi Yamada commander 25th Air Flotilla, operating out of Japanese airfields in New Guinea and Truk as well as the newly established seaplane bases were allocated to support the operation.

### American Intelligence On Japanese Intentions

For a number of years prior to the outbreak of the war in the Pacific the USN, as well as the British and the Dutch, were engaged in gathering intelligence on the Imperial Japanese Navy by

signals intelligence. Even at this early stage the importance of the information being gathered was realised. Apart from providing the USN with invaluable intelligence the USN was, as a result of the three yearly Grand Manoeuvres held by the IJN, able to test "its theories of Traffic Analysis under simulated war conditions."<sup>10</sup> One by-product of this intelligence was the increasing of the maximum speed of USN battleships to 28 knots after it was learnt, in 1936, that the top speed of the modernised *NAGATO* was over 26 knots.

The American assault on the Japanese codes and cyphers went on relentlessly and by September 1940 they were reading parts of the Japanese naval operations code, designated JN25. Prior to the attack on Pearl Harbor the Japanese changed the callsigns of all their ships and also introduced a modified version of the JN25 code. It took until April 1942 to break this new code. This work was undertaken in Hawaii, Washington and Melbourne.

Prior to the fall of the Philippines the USN's signals intelligence unit at Corregidor had been transferred to Melbourne and became a joint USN/RAN unit known as Fleet Radio Unit Melbourne (FRUMEL). This organisation "played an important part in the Battle of Coral Sea and in the Battle of Midway"<sup>11</sup> The only Japanese Naval Cryptographical system that the USN's code breakers did not crack was the Flag Officers Cipher, on which work had ceased on 10 December 1941.

On 28 March U.S. Naval Intelligence decoded a message that stated "THE OBJECTIVE OF MO WILL BE FIRST TO RESTRICT THE ENEMY FLEET MOVEMENTS AND WILL BE ACCOMPLISHED BY MEANS OF ATTACKS ON THE NORTH COAST OF AUSTRALIA"<sup>12</sup>. As a consequence of the ability to read Japanese naval communications traffic the Americans were almost as well informed on what was planned as the Japanese commanders.

The extent of the advance knowledge of Japanese operations is shown by the following extracts from FRUMEL records:



"9th April 1942. C-in-C Combined Fleet today asked for a report on progress of repairs to KAGA. He requires her services as soon as possible since she is due to take part in the "RZP" campaign.

(Comments 1. "RZP" is the place designator for Moresby.)<sup>13</sup>

"24th April 1942 3. Included in the Area Callsigns allocated yesterday by C-in-C 4th Fleet are calls for:-

"RZP" Occupation Force (Moresby)

"RXB" Occupation Force (Tulagi)"<sup>14</sup>

"4th May 1942 7. Message to 5th Cruiser Division and 5th Carrier Squadron gives the following programme for the "MO" Striking Force:

On X-minus 2 or 3 day they are to - to the SE of Moresby and attack bases in the Moresby area.

If the Allied Striking Force is found in -, the "MO" Striking Force is to proceed via NNE of "RX" (Solomons) and then proceed south. At 0600 on 6th May after arrival at - further orders will be issued, but if no further orders are received they are to proceed to "RBX" (Tulagi). If air search is required in the southern sectors, the 5th Carrier Division is to send aircraft to "RBX" (Tulagi) at dawn."<sup>15</sup>

Armed with this information the Allies were able to concentrate much of their available striking forces in the Coral Sea area.

### American Response

As the picture of the intended Japanese plans began to develop Admiral Chester Nimitz, Commander-in-Chief of the Pacific Fleet, deployed his two available carrier groups. Rear Admiral Aubrey Fitch commander of TF11 centred on the USS *LEXINGTON* was ordered to sail and join Rear Admiral Frank Jack Fletcher's TF17, centred on the USS *YORKTOWN*, in the

Coral Sea. The *YORKTOWN* group was returning to the Coral Sea after replenishing and conducting a short maintenance period at Tongatabu in the Tonga Islands. From the south was deployed the cruiser force, TF44, commanded by Rear Admiral John Crace RN.

This combined force, under the command of Rear Admiral Fletcher, was designated Task Force 17 and organised as follows:

- **Attack Group.** Commanded by Rear Admiral T.C. Kinkaid consisting of the cruisers USS *MINNEAPOLIS* (flagship), *NEW ORLEANS*, *ASTORIA*, *CHESTER* and *PORTLAND*. Supported by the destroyers *PHELPS*, *DEWEY*, *FARRAGUT*, *AYLWIN* and *MONAGHAN*.
- **Support Group.** Commanded by Rear Admiral J.G. Crace RN and consisting of the cruisers HMA Ships *AUSTRALIA* (flagship), *HOBART* and USS *CHICAGO* supported by the destroyers USS *PERKINS* and *WALKE*.
- **Air Group.** Commanded by Rear Admiral A.W. Fitch and consisting of the aircraft carriers USS *LEXINGTON* (flagship) and *YORKTOWN* and supported by the destroyers USS *MORRIS*, *ANDERSON*, *HAMMANN* and *RUSSELL*.
- **Fuelling Group.** Commanded by Commander J.S. Phillips and consisting of the oilers USS *NEOSHO* and *TIPPECANOE* supported by the destroyers USS *SIMS* and *WORDEN*.
- **Search Group.** Commanded by Commander G.H. de Baun and consisting of the seaplane tender USS *TANGIER*, based at Noumea, and 12 patrol aircraft.
- **Eastern Australian Submarine Group.** Commanded by Rear Admiral Francis W. Rockwell and consisting of the submarines; S 42, S 43, S 44, S 45, S 46, S 47, S 37, S 38, S 39, S 40 and S 41.
- **Allied Air Forces.** Commanded by Lieutenant General George H. Brett and consisting of Allied aircraft based in Australia and New Guinea.

In the Pacific Fleet headquarters at Pearl Harbor a large chart of the Coral Sea area was laid out and staff commenced plotting the movements of the two opposing forces. An orange<sup>16</sup> line traced



the expected movements of the Japanese fleet whilst blue lines showed the converging Allied forces. After their return from the Tokyo raid Rear Admiral William F. Halsey's two carriers were quickly refuelled and replenished and sailed on the 30 April.

The deployment and operation of the American naval forces into the Coral Sea was further complicated by the fact that the Coral Sea lay in the newly created South West Pacific Area, under the control of General Douglas MacArthur. This prevented Commander De Baun from sending his patrol aircraft into the area where Brett's aircraft were to be searching, even though "it was physically impossible for the to do it".<sup>17</sup> The submarines were to patrol the coastal waters of New Guinea, the Louisiades and the Bismark Sea. Again they did not cross the demarcation line and patrol the approaches to the Solomons. Had they done so then the movements of Tagaki's carriers into the Coral Sea may have been detected. Fletcher was also reliant on MacArthur's command for the provision of timely intelligence information on the movements of the Japanese. Information from these aircraft was first evaluated by local command staff and then what they considered relevant was passed onto Fletcher. The fact that the Coral Sea battleground straddled two different operational commands did complicate matters.

### Japanese Intelligence On American Moves

As with the Western powers the Japanese had some success in breaking foreign codes. "In 1934, the U.S. State Department's Gray Code (AF2) was resolved completely and this success was extended also to the British Interdepartmental Code (BF5) later in the same year."<sup>18</sup> As a result of their initial successes in the Pacific War the Japanese captured an amount of American and British code and cypher material. This coupled with the transfer of information from the Germans, via the Naval Attache in Tokyo enabled the Japanese to have a reasonable picture of American movements in the early months of the war. However, as the effectiveness of Japanese decoding efforts began to decrease, primarily as

a result of the introduction by the Americans and British of one-time pads as well as strip and machine cyphers from during 1942, the Japanese had to rely more on radio direction finding and traffic analysis to follow American warship movements. The Japanese attached "considerable significance to their findings, particularly with regard to RDF and the analysis of traffic volume."<sup>19</sup>

At the time of Operation MO Japanese naval intelligence appear to have had an incomplete picture as to the disposition of the US carriers. "They could only assume since they believed the *Lexington* had been sunk by their submarines in January, the three carriers supposed to have taken part in raiding Tokyo must be back in Pearl Harbor."<sup>20</sup> "Intelligence available to him [Inouye] indicated that opposition would come mainly from US and RAAF aircraft operating from bases in North Queensland, and a 'British' sea force - obviously Crace's Task Force 44"<sup>21</sup>. FRUMEL records for the 4 May stated that "Message to all Flag Officers from HO KO 8 (unidentified)<sup>22</sup> states U.S. Striking Force left Hawaiian waters on 1st May and requests all possible assistance in determining subsequent movements."<sup>23</sup> The departing aircraft carriers were the USS *ENTERPRISE* and *YORKTOWN* which had returned from the Doolittle raid.

### Opening Moves

On 1 May, the two American carrier groups rendezvoused and began to refuel from their attendant oilers. The *YORKTOWN* group completed fuelling first and, when Rear Admiral Fitch advised Rear Admiral Fletcher that he did not expect to complete fuelling till noon on the 4 May, Fletcher decided to move the *YORKTOWN* group further to the north-west. He advised Rear Admiral Fitch of his intention and of a new rendezvous. The second rendezvous, set for the morning of the 4 May would see the Australian cruisers *AUSTRALIA* and *HOBART* join the force for the first time.

As the Americans were refuelling and attempting to position themselves so that they could intercept any Japanese naval forces, the *SHOKAKU* and







# PLAN 2 THE BATTLE OF THE CORAL SEA

Ships Tracks, April 30<sup>th</sup> - May 8<sup>th</sup>,  
1942

CLOCKS WERE ALTERED FROM  
Z-11½ to Z-11 at 1700/7

## KEY

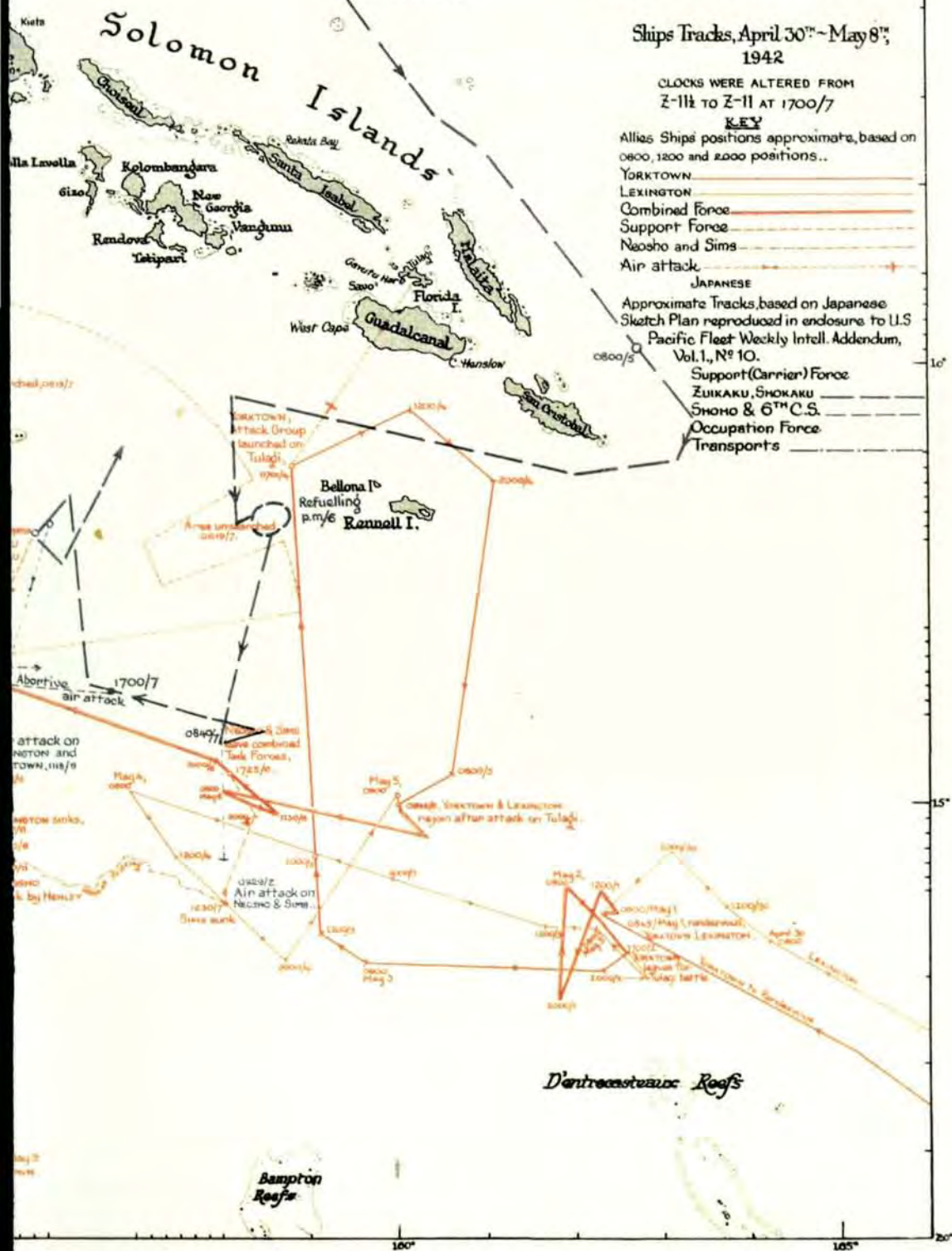
Allies Ships positions approximate, based on  
0800, 1200 and 2000 positions..

YORKTOWN  
LEXINGTON  
Combined Force  
Support Force  
Neosho and Sims  
Air attack

## JAPANESE

Approximate Tracks, based on Japanese  
Sketch Plan reproduced in enclosure to U.S.  
Pacific Fleet Weekly Intell. Addendum,  
Vol. 1, No 10.

Support (Carrier) Force  
ZUIKAKU, SHOKAKU  
SHOHO & 6<sup>TH</sup> C.S.  
Occupation Force  
Transports





*ZUIKAKU* were sailing from Truk and by the 3 May, as the Tulagi Invasion Group was landing, were north east of Rabaul. With the successful occupation of Tulagi Operation MO was well and truly underway.

On receiving advice of the landings at Tulagi Fletcher turned the *YORKTOWN* group to the north east and increased speed to 27 knots with a view to launching strikes against Tulagi on the morning of 4 May. As *YORKTOWN* headed for Tulagi the Fletcher detached the tanker, *NEOSHO* and her escorting destroyer *RUSSELL* to rendezvous with Fitch and Crace and advise them of his intentions and of a new rendezvous planned for the morning of the 5 May some 300 miles south of Guadalcanal.

By 0630 on the morning of the 4th *YORKTOWN* was in a position to be able to launch carrier strikes against Tulagi. The first strike arrived at Tulagi about 0815 and commenced to attack Japanese shipping in the harbour. A total of three strikes were launched by *YORKTOWN* against Tulagi. By the end of the day the Americans had sunk the destroyer *KIKAZUKI*, four landing barges and destroyed five floatplanes whilst damaging the minelayer *OKINOSHIMA* and a destroyer. All this was achieved at a cost of three aircraft, 22 torpedoes, 76 1000lb bombs and thousand of rounds of machine gun ammunition. Whilst these strikes would have confirmed any suspicions the Japanese had as to the presence of American carriers in the Coral Sea, they also destroyed the Japanese reconnaissance capability out of Tulagi and so reduced the number of long range aircraft available to the Japanese, particularly in the north east Coral Sea.

On completion of the strikes against Tulagi, Fletcher retired to the south to rendezvous with Fitch and Crace. After making the rendezvous on the morning of the 5 May Fletcher commenced to refuel his ships. On completion of refuelling Fletcher headed for the Louisiade Archipelago to intercept the Japanese forces he expected to pass through there en-route to Port Moresby. Meanwhile the carriers of Admiral Tagaki's Carrier Striking Force were rounding the southern tip of the Solomons and about to enter the Coral

Sea behind the American carriers.

On the 6th a Japanese land based reconnaissance aircraft spotted the American carrier group refuelling but this information did not reach Tagaki until the next day. Fletcher was advised that B17s made an unsuccessful attack on the *SHOHO* and other Japanese naval units and transports which were sighted heading south from Rabaul. Aircraft launched that afternoon by the Americans flew over the Japanese carriers without spotting them due to the heavy cloud cover. Tagaki, meanwhile having found nothing, headed north and commenced to refuel, only 70 miles away from Fletcher's carriers. At the end of the day Fletcher, having refuelled his ships, detached the almost empty *NEOSHO* to the south with the destroyer *SIMS*. (Plan 2<sup>24</sup> shows the movements of ships for the period 30 April to 8 May)

### Coral Sea Battle

Early on the morning of the 7th Fletcher split his force by detaching Crace and the Support Group to cover the Jomard Passage and intercept the invasion force as it exited. This was an extremely risky decision and perhaps the most important in the entire battle. For not only did Fletcher weaken his own air defences but he also exposed Crace's ships to the possibility of air attack without hope of fighter protection, as occurred with HM Ships *PRINCE OF WALES* and *REPULSE*. On being located by Japanese aircraft at 0810 Crace's Support Group assumed a diamond formation and waited for the inevitable air attacks. These commenced in the afternoon with attacks by Japanese land based aircraft.

On their return to Rabaul the Japanese reported that they had sunk a battleship and damaged a second and a cruiser. In actual fact not one hit was scored by any attacking aircraft, including a group of American B17s which accidentally attacked the cruisers later in the day. This remarkable achievement was put down to the skilful shiphandling of the Crace and his commanding officers. As a result of the inaccurate battle reports no further strikes were launched from Rabaul. Crace was now free to intercept the



invasion force, when as expected, it emerged from the Jomard Passage. However, Admiral Inouye had ordered the Moresby invasion force to reverse course whilst the situation with regard to the "battleship" sightings was clarified. Had Crace's ships been with Fletcher's carriers the invasion force would have been able to proceed onto Port Moresby.

At the same time as Crace had been spotted the Japanese had commenced to launch, from the *SHOKAKU* and *ZUIKAKU*, a 78 plane strike against a reported American carrier and cruiser sighted to the south. About an hour later a second report arrived advising the Japanese that an American carrier and about ten other ships were sighted 280 miles to his north west. As it was too late to recall the strike all that Rear Admiral Tadaichi Hara, commander of the 5th Carrier Division, could do was wait for the return of his aircraft. The two American ships were located at 0954 and the Japanese immediately realised their error. They were about to attack the oiler *NEOSHO* and the destroyer *SIMS*. During the course of the attacks that followed the *SIMS* was reduced to a wreck, and sunk, whilst the *NEOSHO* was severely damaged. She was later sunk by torpedoes and gunfire from the USS *HENLEY*.

Whilst the Japanese were shadowing Crace and preparing to attack the *NEOSHO* and *SIMS* the Americans were attempting to locate the Japanese carriers. At 0815 a sighting report was received indicating that a force of two carriers and four cruisers were 235 miles northwest of the Americans. This report was, unfortunately, inaccurate as what had been sighted were two cruisers and some minor craft. However, acting on this report Fletcher immediately commenced to launch a strike of some 90 aircraft from both carriers. It was after the last of the aircraft were launched that the error was realised. However, Fletcher decided to let the strike continue. At 1022 a message was received that land based aircraft had spotted a carrier, *SHOHO*, and other ships a few miles north of Misima Island. The outbound strike was then re-directed to the location of the *SHOHO*.

When sighted by the American aircraft, at around

1100, *SHOHO* and her consorts were in an area of clear weather with excellent visibility. *SHOHO* could not launch any aircraft at this stage because she was in the process of refuelling her fighters which had been flying reconnaissance missions. As *SHOHO* was turning into the wind to launch her aircraft the main American attack, which was delayed whilst the slower torpedo bombers arrived, started. *LEXINGTON*'s dive bombers and torpedo bombers made a co-ordinated attack followed almost immediately by *YORKTOWN*'s dive bombers. By the time *YORKTOWN*'s torpedo aircraft arrived *SHOHO* was already doomed. Unfortunately, instead of attacking the other Japanese ships they continued the attack on *SHOHO*, which eventually received approximately 13 bomb and seven torpedo hits. Not one other Japanese ship in the group was damaged.

By 1335 the Americans had recovered their aircraft and Fletcher was debating whether to launch another strike against the remaining Japanese ships. However, he decided against this on the grounds that the other Japanese carriers still had not been located. Later in the afternoon Fletcher learnt of the attack on the *NEOSHO*. But again an incorrect position had been given. Meanwhile Admiral Tagaki on learning of the attack on the *SHOHO* was powerless to act because of his earlier decision in attacking the incorrectly reported aircraft carrier and cruiser, *NEOSHO* and *SIMS*. However, once his aircraft returned Tagaki decided to launch a late afternoon strike against the American carriers, though he had no firm idea as to their position.

For this attempted strike Tagaki selected his most experienced aircrew, mainly as the aircraft would be returning in the dark. The 12 dive bombers and 15 torpedo bombers launched in three groups at 1630 hoping to locate and attack the Americans at dusk. As it was they could not locate the Americans and jettisoned their ordnance for the return flight. On the return flight one group of Japanese almost flew over the top of the Americans, and failed to see them. Unfortunately, the American carriers were using their radar to good effect and intercepted the returning Japanese. In the ensuing melee eight Japanese



were shot down for the loss of three Americans. But more importantly from the Japanese side Tagaki had lost eight (almost 10%) of his most experienced aircrew. Two other groups arrived at where they thought their carriers were and commenced a search. When three aircraft saw a carrier and attempted to land after giving the correct recognition signals *YORKTOWN*'s gunners opened fire and the aircraft retired. All in all only 18 aircraft returned to the Japanese carriers. Later that night both commanders contemplated sending their surface ships out to attack the opposing carrier force, and both rejected the idea because they expected attacks the next morning and needed the ships to provide additional anti-aircraft firepower.

On the morning of the 8th both sides were to locate their opponents almost simultaneously. At 0900 the Americans commenced to launch their aircraft whilst the Japanese commenced at 0915. Both the Japanese and Americans passed each other as they headed for their respective targets. The heavy cloud, which had dogged the entire operation prevented any sightings.

The first American aircraft, dive bombers from *YORTOWN*, arrived over the two Japanese carriers, which were operating as separate groups, at 1030. They had to wait another ten minutes for the arrival of the slower torpedo bombers before commencing an attack. At 1057 *YORKTOWN*'s aircraft attacked the *SHOKAKU*. The *ZUIKAKU* had managed in the meantime to hide in a rain squall. Again the inexperience of the American aircrew showed, with bombs and torpedoes generally being released too far away. *SHOKAKU* managed to avoid all the torpedoes that were fired at her but she was hit by a number of bombs. The damage done and fires started prevented her from launching aircraft. Only part of *LEXINGTON*'s strike arrived due to difficulties in locating the targets in the squally weather. After they arrived they commenced to attack the Japanese carrier.

Whilst the American aircraft were commencing their attack on *SHOKAKU* the Japanese were detected by *LEXINGTON*'s radar at 70 miles and closing. At this stage there were only eight fighters

in the air, all short on fuel, with a further nine aircraft having just landed on *LEXINGTON* and in the process of being refuelled. Perhaps because of the fuel problem, or inexperience, the fighter direction officer on *LEXINGTON* placed the his combat air patrol too close to the ships and at such an altitude that they were below the dive bombers and above the torpedo bombers. In either case, they could do little to break up the Japanese attack which commenced at 1118. Two minutes later *LEXINGTON* was hit on the port side forward by a torpedo and then a second hit opposite the bridge. After the torpedo bombers came the dive bombers which scored at least two hits and several near misses. As a result of these attacks fuel tanks were ruptured and the ship was on fire in at least four places and developed a 6 degrees list to port.

*YORKTOWN* was also attacked by the Japanese but managed to avoid the torpedoes, which were launched from only one side, but was hit by one bomb. This bomb hit reduced *YORKTOWN*'s speed to 24 knots. At about 1230 the American strike group began to return and as *LEXINGTON*'s aircraft lifts were jammed in the upright position she could retrieve her aircraft. Shortly after this the ship was rocked by a large internal explosion caused by the build up of petrol fumes. This explosion started new fires which were fed by oil and other flammables. This fire gradually spread and at 1707 the order was given to abandon ship. *LEXINGTON* was finally sunk by torpedo from the destroyer *PHELPS*. With the last of *LEXINGTON*'s aircraft onboard *YORKTOWN* the remainder of the force withdrew to the south and thence to Pearl Harbor.

Fortunately for the Americans the Japanese were not in a position to take advantage of the loss of the *LEXINGTON*. *SHOKAKU* was so badly damaged that she had to return to Truk for repairs before going onto Japan. An entry in the *FRUMEL* records for the 10th gives her intended itinerary for the return voyage with the comment "Looks like a reasonable submarine target"<sup>25</sup>. A warning of what was to come for the Japanese merchant fleet. The second carrier, *ZUIKAKU*, was low on fuel and had less than forty serviceable aircraft left. As a consequence of this Admiral Inouye



ordered the Moresby invasion postponed and the ships to retire. Admiral Yamamoto however, ordered Tagaki and Goto to pursue the Americans. The Japanese broke off the search on the 11 May, due to the allocation of insufficient forces Yamamoto had missed his chance to destroy a large proportion of the US Pacific Fleet.

Admiral Fletcher returned with *YORKTOWN* to Pearl Harbor where battle damage was made good and the carrier prepared for the forthcoming battle of Midway. Admiral Crace, who had spent the last few days blocking the approaches to Port Moresby, was apparently not advised of the end of the battle nor of Fletcher's departure from the area. Crace departed the area on the 10 May and sailed for Cid Harbour to refuel from HMAS *KURUMBA*. Shortly after arriving at Cid Harbour he received a signal from Fletcher acknowledging his services in the battle.

### The Aftermath

Both the Japanese and the Allies have portrayed the Battle of the Coral Sea as a victory. In a sense they are both right. On the Japanese part they managed to sink more American ships than they lost. Whilst the Allies prevented the Japanese from achieving their objective, the occupation of Port Moresby, as well as reducing the forces available for the forthcoming Midway operation.

Against this, on the part of the Americans, must be weighed the fact that the Japanese assault forces remained intact and all that had stood in the way of the Japanese and Port Moresby were Crace's cruisers. Fletcher's carriers, which were engaged in trying to locate and destroy the Japanese carriers, were too far away and too busy to provide any opposition. The decision by Fletcher to weaken his forces by detaching Crace had proved to be the correct one, even though this may have contributed to the loss of the *LEXINGTON*.

The importance of accurate and timely intelligence, on an enemy's intentions and actual movements, was clearly demonstrated at Coral Sea. The major advantage the Americans had over the Japanese by way of strategic intelligence

on the operation was somewhat negated by inaccurate position reporting, poor tactical intelligence, personnel inexperience and that the Coral Sea battleground was split between two operational commands. Given the intelligence advantages and the forces employed what should have been a significant victory for the Americans was reduced to an inconclusive sparing match across the Coral Sea.

The result at Coral Sea also highlighted the weakness of Japanese strategy and planning. Due to the lack of a singular planning staff to direct the course of the war the Japanese lost sight of the overall objective, implementation of the Basic War Plan. In losing sight of the objective the Japanese failed to concentrate their forces to ensure success. Midway was another example of this. The plans devised for operations tended to be overly complex and "seemed heavily dependant on traditional ideas extracted from the game of GO"<sup>26</sup>. This may have been a product of the Japan's highly ritualistic culture.

Notwithstanding its inconclusive nature, the battle of the Coral Sea's place in history has been assured. For the first time two fleets had fought a naval engagement and the constituent naval units never saw each other. When coupled with the attacks on Taranto, Pearl Harbor and finally the Battle of Midway it marked the end of the battleship as the major striking unit of modern fleets. Subsequent naval operations, whilst demonstrating the need for a well balanced and highly trained naval force, were to highlight the flexibility of carrier borne airpower.

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Jozef Straczek joined the Royal Australian Navy in January 1971 as a Junior Recruit.

After a year at HMAS *Leeuwin* he was posted to HMAS *Nirimba* and later returned to *Leeuwin* as a Topman.

In 1977 he was commissioned as a midshipman, trained at HMAS *Cerberus*, specialising as a Supply Officer.

He served at HMAS *Cairns*, in Navy Office, on loan to the PNGDF and a number of supply postings.

He left the Navy in 1990 to take up a civilian appointment as Senior Historical and Archives Officer in Navy Office, Department of Defence, Canberra.

He has given numerous presentations and contributed articles to journals and other publications on naval historical topics.





*The patrol boat HMAS GERALDTON seen off the West Australian coast with Garden Island in the background.  
Photo courtesy of Navy Public Relations, WA*



## The Coral Sea Campaign - New Zealand's Perspective

by Commander Richard Jackson RNZN, Director of Corporate Relations Policy,  
Royal New Zealand Navy

*Fifty years ago, during 1942, New Zealand lay vulnerable in the path of Japanese conquest. As Australians and Americans remember the fiftieth anniversary of the Battle of the Coral Sea this month, it is relevant to ask what was New Zealand's Contribution - what did New Zealand do towards the ANZAC bond?*

The Pacific War opened in December 1941 with simultaneous attacks on the British Empire's forces in Singapore and Malaya, US forces in the Philippines and the US fleet at Pearl Harbour. In the following two months Japan's astonishing military successes made all the pre-war assumptions and defence policies for Australia and New Zealand irrelevant; it became clear that Britain (to which both nations had contributed so much), was unable to defend its Pacific Empire. New Zealand was suddenly forced into self-reliance and a search for new defence partners.

### The Japanese Strategy

Japan's war strategy was focused on seizing and holding the rich resources of South East Asia - Japan then expected to gain recognition of her conquests at the peace table when the allies were worn down. The plan to seize the resources of Malaya and Indonesia (then the Dutch East Indies) was developed during 1940-41. Both the Imperial Army and the Navy supported it, but for different reasons. The Army's strategic vision was that possession of the southern resources area would enable it to successfully overcome China and then be ready to fall on the Soviet Far East (given their assumption of a Nazi German victory in the war against Russia which had only begun in June 1941). The Navy's strategic view was diametrically opposed to that of the Army; the Navy saw possession of the southern resources area as the source of fuel for fighting the US fleet, and that a successful, but essentially, defensive war in the central Pacific would force the Americans to the conference table and so gain Japan permanent hegemony over their "Co-prosperity Sphere".

The first phase in Japan's war plan then was the invasion of Malaya, in order to conquer the British base at Singapore, followed immediately by the conquest of the Dutch territories (where the major oil fields were). The south-east flank of this vast area would be secured by taking the Australian port at Rabaul, with forces operating from the Japanese base of Truk in the mandated islands of the Carolines (today the Federated States of Micronesia).

The Japanese war plan was so well carried out that the British forces in Malaya (comprised of Indian, Australian and British troops; New Zealand had provided a significant proportion of the air force personnel) were defeated and Singapore was taken in only 70 days. By the end of March 1942 the forces of Imperial Japan were driving the British out of Burma, had occupied islands in the Indian Ocean, controlled all of Indonesia and the Philippines (except an isolated American force under General Wainwright in Corregidor and a small Australian force in Timor), were bombing the Australian mainland regularly, and had started to advance south from Rabaul towards the Coral Sea.

With the quick success of their first phase, the Japanese had several options open to them including:

- a drive through the Indian Ocean to link up with the Germans in the Middle East,
- a second front against the Soviet Union (the German Army had spent the winter in sight of Moscow and appeared to be likely to defeat Russia in the coming summer)
- an invasion of Australia, or
- an invasion of Hawaii.

Each of these options depended upon the commitment of large forces of Japanese Army troops, but the Army, which had no real mechanism for joint staff work with the Navy, refused to support the large-scale amphibious



options preferring to husband its main strength for operations in China and future operations against the Soviet Union. The compromise option, then, was a strategy of isolating Australia, which required the Army to commit only a relatively small number of troops to the invasion of the South Pacific islands.

The Japanese Navy chose to raid British positions in the Indian Ocean before turning to the strategy of isolating Australia. The Indian Ocean raid of April 1942 was successful, sinking many ships, including two heavy cruisers and a carrier and forcing the Royal Navy to retreat to the east coast of Africa.

The agreed second phase strategy for the Japanese was developed by the Imperial Navy as a three-part plan:

- a. a seaborne invasion of Port Moresby in early May to secure the south coast of New Guinea and gain a base for air raids over Queensland,
- b. an assault on the Aleutian Islands and Midway Island in June, designed to draw the US fleet into decisive battle in the central Pacific,
- c. the Combined Fleet would move south in July, covering Army forces as they invaded New Caledonia, Fiji, Samoa and Tonga.

These last islands would be developed as bases to isolate Australia and New Zealand from American resupply. Sea and air raids would be conducted against major ports and cities in Australia and New Zealand, and shipping at sea would be sunk. Both nations would be cut off from US oilfields and refineries.

This strategy was put into action when two aircraft carriers of the Pearl Harbour strike force were assigned to the South Seas Command to cover the forces sent to invade Port Moresby.

### **The Allied Strategies.**

The pre-war plans of the Allies did not envisage fighting in the South Pacific. The British strategic concept was that Singapore would withstand a siege for 180 days and in that time a battle fleet would be sent from European waters to fight the Japanese Navy in the South China Sea. The

nucleus of a battlefleet was sent as a deterrent force before the Pacific war opened, but without effective air cover the two capital ships were sunk on 10 December 1941 by Japanese naval aircraft operating from Indo-China. A second battlefleet was laboriously built up in Ceylon by the end of March 1942, but the Japanese naval raid of early April sent it retreating to Africa.

Both Australia and New Zealand had subscribed pre-war to the concept of imperial defence based on the "Singapore strategy". Other possible alternatives to Singapore for a major naval base were either in the prohibited area for fortifications (under the terms of the 1922 Washington conference treaties) such as Rabaul and Fiji or were considered too far away from the expected theatre of operations (the South China Sea) such as Sydney. New Zealand had invested both public political support and funds to the development of the Singapore base in the pre-war years. As tension with Japan grew during 1941 she, like Australia, backed this commitment with manpower – naval officers recruited for service in small craft on the Malayan coast and airmen to man fighter squadron at Singapore. An airfield construction unit was also sent – it built a number of airfields then faced the ignominy of blowing them up as the Japanese advanced.

The disasters of the defence of Singapore were deeply felt in New Zealand, not only were the Japanese seen to be frighteningly efficient but loss of the "sure shield" of the Royal Navy made our people realise that the islands of New Zealand were awfully vulnerable.

The demands of what was now a global war, with the situation in Russia, Egypt and in the North Atlantic still very critical, were such that the American and British grand strategy was to emphasise the survival of Britain and the fight against Germany over all. Only minimal American forces would be committed to the South Pacific, after the vital points of Hawaii and Panama were made secure. For Britain, no operational forces could be sent to Australia or New Zealand (although supplies could be and were diverted from the Middle East). In a cable to the Prime Minister of New Zealand, Mr Fraser,



Churchill said in January 1942:

"you would not expect me to make promises of support which cannot be fulfilled, or of the early redress of a situation in the Far East which must take time to rectify..."

British helplessness to extend its forces beyond India meant that the Pacific dominions were inevitably left to the Americans to protect.

The American pre-war strategic concept did not include defence of the South Pacific except to garrison American Samoa. The US Navy's pre-war expectation had been to fight reinforcement convoys through to the Philippines, but the loss of US air cover there and the rapid retreat of the US Army had forced the Americans to abandon that objective. American strategy in the Pacific was defensive and little priority would be given to the home defence needs of New Zealand.

### New Zealand's Contribution

New Zealand's primary role up until outbreak of Pacific War was as a training area for manpower for the war against Germany. The Army's 2(NZ) Division in Egypt had since 1940 been reinforced by seven drafts of troops, each of some 5000 men; an eighth reinforcement was awaiting shipment to the Middle East when the Pacific War broke out. The main operational force of the New Zealand Army in the Pacific, apart from the coast-defence artillery units at the main ports, was the Brigade stationed in Fiji since late 1940. (The NZ artillery in Fiji fired one of the first shots of the Pacific War at HMNZS *Gale*, when she failed to answer a recognition signal correctly!)

The Air Force was structured as a training organisation, intended to provide about 100 fully trained aircrew for the RAF each month and nearly 200 partly trained crew for the Empire Air Training Scheme in Canada. The few operational aircraft of the RNZAF (Hudsons and obsolete biplanes - Vildebeeste, Vincents and Baffins) conducted operational maritime reconnaissance and anti-submarine patrols from Nelson Whenuapai and Harewood.

Only the RNZN, with its convoying and mine

sweeping duties had, prior to December 1941, a major operational role as well as its training role. Nonetheless the RNZN had large training commitment for the Royal Navy and very few first line combatant ships - only two cruisers (HMS *Neptune*, partly New Zealand manned had been sunk in the Mediterranean) while its force of purpose-built minesweepers and corvettes was only just being delivered.

As the prospect of direct Japanese attack grew more likely, the government and Chiefs of Staff sought to prepare the nation for defence using any and all resources available. Civilian aircraft and trainers (even Tiger Moths) were requisitioned into an anti-invasion scheme, in which they would have basic bomb racks fitted and be sent to bomb any invasion force. The Army Territorial Force was expanded to nearly 50,000 men and the Home Guard, comprised of men over military age, reached nearly 100,000. Factories like the nation's railway Workshops began making simple weapons - mortars and landmines - and the Minister for Public Works, Bob Semple, sought to produce tanks from tractors protected with corrugated iron.

New Zealand's defence deployments then, on the eve of the Battle of the Coral Sea, were as follows:

#### Fiji

- A New Zealand brigade-group (over 7 000 men), and two RNZAF reconnaissance squadrons (one of three old flying boats and one with a mixture of a few modern Hudsons, old Vincents and some converted civil aircraft). New Zealand's only four anti-aircraft guns were shipped to Fiji soon after the outbreak of the Pacific War. (Dummy guns were erected in NZ in their place until replacement guns arrived).

#### Fanning Islands Tonga and Western Samoa

- One or two companies of troops in each place (a total of only some 600 men).

#### The Gilberts and Ellice Islands, and other islands including the sub-Antarctic islands

- Coastwatchers (reporting to the RNZN).



The option of bringing our trained and combat-hardened Division home from the Middle East was studied, but the world-wide shipping shortages and the needs of the Eighth Army were such that it was seen as more effective for the overall war effort if the NZ Division stayed in Egypt and US Army and Marine divisions were shipped to the South Pacific (although they would not be deployed until May and June).

At the same time New Zealand sought to get modern equipment, especially fighters and radar for the NZAF, but the demands of global war affected the availability of stocks. For example, by April only 12 P-40 Kittyhawk fighters had arrived (72 were wanted as well as other aircraft) because the Japanese raid on Ceylon caused the remainder to be diverted to the RAF in India. The New Zealand survivors from Singapore manned those 12 fighters and became 14 Squadron RNZAF at Masterton. The nation's only air warning radar set was installed on Motutapu Island near Auckland. When it did detect an enemy aircraft – a seaplane launched from a Japanese submarine in May – the duty controller in Auckland did not believe the report!

Our Navy's two cruisers, and the armed merchant ship HMNZS *Monowai*, were assigned to the ANZAC Squadron, under Australian Command and tasked by Admiral Nimitz, the US naval Commander-in-Chief. Both HMNZS *Achilles* and *Leander* escorted many important troop convoys, including the famous passenger ships *Queen Elizabeth* and *Mariposa*, as US troops were deployed to the South Pacific and Australia. In February the two RNZN cruisers had escorted the fleet oiler USS *Platte*, to fuel the American carrier USS *Lexington* while she attempted to attack the Japanese base of Rabaul.

At the beginning of May both NZ cruisers, along with three US destroyers, were detached from the ANZAC Squadron and tasked by Admiral Nimitz to cover the landing of US troops in the New Hebrides (Vanuatu) while the Battle of the Coral Sea was fought only a few hundred miles to the north-west.

New Zealand's new corvettes and minesweepers

were spread across the Pacific on their delivery voyages at this time. HMNZS *Moa* was based at Fiji until early May, HMNZS *Kiwi* was escorting convoys from the US and reached NZ in late May, while HMNZS *Tui* and the four "Isles" class minesweepers had escorted convoys across the Atlantic and through the Caribbean. Given the world-wide shortage of sonar-equipped escorts at a time when the German U-boats, as well as Japanese submarines, were at their most dangerous, these New Zealand ships were needed in the California area until June, to escort a convoy to Pearl Harbor.

The anti-submarine ships, in fact, arrived just in time because Japanese submarines began operating in NZ waters in late March 1942 (when a submarine sent a seaplane to reconnoitre Wellington harbour), and continued to conduct patrols in the Tasman and around New Caledonia and Fiji until 1944.

### The Critical Pacific Battles

The facts of the battles of Coral Sea and Midway do not need repetition here. When both sides withdrew from the Coral Sea, although the USN had taken grievous losses in men, ships, and aircraft, the Japanese had also been badly hurt and had to call off their seaborne attack on Port Moresby. For them it was a strategic defeat. Instead of a quick assault, they now had to face an overland campaign in New Guinea where the Japanese Army was to meet and be defeated by Australian troops on the Kokoda Trail.

Additionally, and more importantly, the damage to the Japanese carriers could not be repaired in time before the Midway operation in early June. Instead of six carriers, Admiral Yamamoto would attempt to seek battle with the US fleet with only four of his Pearl Harbor striking force. In contrast, the USN would patch up the *Yorktown* sufficiently so that she could take part in the Battle of Midway and, in fact, play a crucial role.

When the four Japanese fleet carriers were sunk at Midway, with only the USS *Yorktown* lost in exchange, the Imperial Japanese Navy lost their ability to defeat the US fleet. The invasion force



abandoned the plan to invade Midway and their battleships retreated from the area. Having lost the capacity to command the seas, the final stage of Japan's three-part Pacific plan was made impossible. No invasion force could be directed at Fiji, Samoa or New Caledonia. The strategy to isolate New Zealand and Australia was fatally weakened.

### **The Impact on New Zealand**

The significance of the two major naval battles was not readily appreciated by the population. Too many false hopes had been raised by over-optimistic reporting of the "battle of Makassar Strait" during the Java campaign, while the enormous impact of the early Japanese success (along with all the other bad war news from Europe – the BBC was the primary source of public information) led to an expectation of worse to come. New Zealand continued to prepare for home defence.

And the Japanese did not give up all their offensive ambitions. Submarine patrols took place off the New Zealand coast, in the Tasman and the South Pacific until late 1944, air raids were directed at Australia's northern cities until late in 1943, and other landings were conducted as late as September 1942 when the Gilbert Islands were taken (the NZ coast watchers there

were taken prisoner and a month later executed). A midget submarine raid occurred in Sydney on May 31, and submarine-launched reconnaissance planes flew over Wellington in March and Auckland in late May. It was not until the US 1st Marine Division reached New Zealand in June and then assaulted Guadalcanal in August that the Pacific war reached a balance and the allies began to take the offensive.

But the Battle of the Coral Sea was, despite the contemporary public perceptions in New Zealand, instrumental in halting the tide of Japanese conquest. The battle assured the security of Australia and New Zealand. But the margins were narrow, and the USN could not have operated with the same confidence had it not had Australian and New Zealand's contributions of ships, secure harbours, troops to defend island bases and the coast watchers and reconnaissance aircraft to report Japanese movements. At a time of global crisis the principle of collective defence was vital to New Zealand.

### **Author's Note:**

The above article is the author's personal opinion and not representative of the New Zealand Ministry of Defence or the New Zealand Defence Force. Preparation of the article was based primarily on New Zealand Official Histories.





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# ALLIANCES IN THE POST COLD WAR ERA AND THEIR IMPLICATIONS FOR THE PACIFIC BASIN

by Lieutenant Commander Alan Hinge, RAN

*'We seek new ways of working with other nations to deter aggression and to achieve stability, prosperity and above all peace'*

United States President GEORGE BUSH 12 January 1991

Suddenly, after three generations, the Soviet Union has collapsed. By the late 1980's Soviet foreign and economic policies had been de-ideologised. Communism is now seen by all but the most recalcitrant and fanatical as a spectacular failure. After finding some fulfilment in the Brezhnev doctrine of the 60's and 70's — involving the armed propping up and expansion of allied communist regimes — communism has imploded under the Gorbachev or 'Sinatra' doctrine — by finally letting the Soviet people do it 'their way'! The Warsaw Pact has disintegrated and NATO's traditional front line has vanished. In the Far East the Soviets withdrew from Afghanistan and Mongolia and traditional Russian support for Vietnam and Cuba has been cut... Normalisation of Russian relations with China, Japan, Germany, South Korea and ASEAN nations is being pursued with a commitment, borne of dire economic necessity. Thus, the fundamental criterion underpinning Western Alliance strategy since World War Two — the containment of communism — is obsolete....the Russians are not coming! Therefore, as people interested in factors affecting maritime developments, we need to be informed of other organising principles or patterns of international relations which may prevail as we drift into the post cold war era.

The aim of this article is to suggest to readers of the journal the likely array of alliances and national alignments in the post cold war era and to specify the implications of this 'New World Order' for the nations of the Pacific Basin, in particular Australia.

## METHODOLOGY

The Age of Aquarius does not seem to have arrived for most of us. Talk of a new world order has been just that...talk!

The noble words which gave us such warm, 'fuzzy' feelings inside during the heady days of the Gulf War have been overtaken by day to day cares and the vision of a brave new world remains cloudy, based on shaky premises, contradictions and perhaps not just a little wishful thinking. Savage events in Yugoslavia, Georgia and Kurdistan in 1991 and 1992 testify that the human atavism of the old world is alive, robust, and should never be underestimated. A better world order will not grow of itself. It needs us to make it happen. For a start, let's try to develop a clearer vision of a new world order using a systematic methodology rather than wishful thinking.

National alignments are the key determinants of tomorrow's geostrategic landscape. The politics of the post cold war order, like those of any other era, will be shaped by the perceived national interests of the main players. For in a world of uncertainty one thing is certain. This is the willingness of nations to perceive change through the prism of their own naked self interest, and to act accordingly. Consequently, we will first look at the general reasons why nations form alliances and how they choose their friends. Second, we will acquaint ourselves with important global trends — political, ideological, military and economic — which influence countries and hence their future alignment behaviour.

Third, we will look at the current status and prospective interests of major and emergent nations which are likely to be the main players in the post cold war period. Finally, we will concentrate on the strategic implications of any new international alignments in the Pacific basin



## ALLIANCE BEHAVIOUR — HOW NATIONS CHOOSE THEIR FRIENDS.

Alliances are usually seen as '...promises of mutual military assistance between two or more states'.<sup>1</sup> Generally, an alliance is a declaration of future intent meant to convey a deterrent signal. In this essay we will also be concerned with non formal alliances, or national alignments, based on common national interests.

There are many reasons for forming alliances. Alliances convey signals and are seen to produce prestige. They can improve domestic stability and even provide economic entree as well as achieving their classical goal of enhancing political-psychological deterrence. According to classical alliance theory, as detailed in Stephen Walt's book *Origins of Alliances*, nations form alliances for three basic reasons: to balance, to bandwagon or to bond.<sup>2</sup>

A **BALANCE** Alliance is a pragmatic response to a real or potential threat. It usually involves a clear, unambiguous military commitment being sought by all parties. After World War Two, each of the two emergent superpowers sought to surround its opponent and contain him. This generated a myriad of countervailing alliances of which NATO (1948) and the US—Japan Security Agreement (1951) are prominent examples of nations getting together to contain and deter a commonly perceived adversary. On the other side of the Cold war's ideological divide, the Warsaw Pact (1952) was invoked as a balancing alliance against NATO and the Soviet Vietnamese treaty was developed to balance the US and especially China. Some groups of nations have been known to form *de facto* balancing alignments as opposed to formal alliances. For example, the ASEAN Treaty of Amity and Cooperation (1976) is a rare example of a non-military balancing coalescence brought about by post 1975 fears of Vietnamese expansionism in South East Asia.

A **BANDWAGON** alliance occurs when a country allies, or more generally, aligns, with a state that is a dominant neighbour having the potential to economically or militarily threaten it. Small states close to large, dominant states are

always under pressure to bandwagon. Thailand's alignment relationship with China involves an element of bandwagoning as does Jordan's dependent relationship with Iraq as seen during the Gulf War. Bandwagoning can also involve organisations as well as countries hitching their wagon to a dominant state's star to share in the spoils of victory. This was seen to an extent with the PLO supporting Iraq during the Gulf war.

A **BONDING** alliance arises from shared national traits and natures together with ideological and political solidarity between states. Such alliances are traditionally enduring and not simply based on on threat perception consensus. They usually involve traditional allies who are linked by a close coincidence of interest, often leading to a web of positive economic, political and military understandings and formalised agreements. Examples of such alliances are the Anglo-American Alliance, the ANZUS treaty and the ANZAC Pact. Together with NATO these arrangements comprise the formalised web of the Western Alliance.

Alliance bonding demands traditional free association, shared values and similar world views, together with a tradition of commitment to each other. These crucial linkages exist between the US, Britain, Canada, New Zealand and Australia as indicated by their extensive cooperation under the arrangements of ABCA (Armies of America, Britain, Canada and Australia) which concentrates on standardisation of equipments, interoperability and exchange of advanced scientific research.<sup>3</sup> Interestingly, Bonding alliances tend to be the most enduring and comprehensive alliances and are almost invariably characteristics of nations with a strong and long liberal democratic tradition.

## THE GULF WAR — THE WAY AHEAD OR A SPECIAL CASE?

The Gulf War may give us further insight into modern alliance behaviour, but in many ways it is a unique case. Immanuel Kant might well have described the necessity to fight the gulf war as a 'categorical imperative' — an action which is viewed by reasonable men and women as



objectively necessary in itself without reference to any other purpose or circumstance. The categorical imperative of checking Saddam Hussein's increasingly aggressive and irascible behaviour must have accounted to some extent for the high level of consensus among the coalition partners. There are few things better for cohesion than to take on an almost universally despised enemy. It could even be said by some in the military that a Saddam Hussein comes along only once in a lifetime. But, of course, many other factors were involved.

Economic considerations were, as always, crucial. The West will in fact be more dependent on oil by the year 2000 and the possible overrunning of America's most valuable ally in the Middle East, Saudi Arabia, could not be countenanced.<sup>1</sup> Besides, traditional Cold war constraints in the UN Security Council were minimised. The US had the benefit of a far more accommodating Soviet Union having bigger 'fish to fry' at home in terms of daunting domestic problems. China, a year after the Tienanmen Square massacre, was involved in extensive image improving diplomatic activities world wide and did not want continued embarrassment by appearing to give de facto support to the 'bad guy'. Therefore, the United States had the possibly never to be repeated opportunity to strike with full UN endorsement.

Furthermore, the US could use substantial economic leverage in terms of debt forgiveness with Egypt and Syria and the US knew that it was a war it could win, given sufficient and sustained political will. In short, a golden opportunity existed. Consequently, it should not be implied that the UN is the new key to order and alliance formation in the post cold war era. The Security Council only agreed to decisive action under unique conditions. The US ultimately controlled the pace and pattern of the war. Ultimately, the UN lacked any real influence over military operations and their objectives. Military operations became identical with the policy of the country leading the push, that is, the United States. This is not to say that the prestige of the UN has not been much improved as a result of the Gulf War. However, UN success or lack thereof

in Cambodia and Yugoslavia will be the acid test of UN capability and credibility in the post cold war era.

Very importantly, the Gulf War may also indicate an improved willingness and ability of nations to form ad hoc coalitions temporarily against threats involving possible nuclear, biological and chemical proliferation as well as terrorism and even piracy. Coalitions — which are alliances or unions between disparate groups, factions or partners especially for some temporary and specific reason — may displace formal alliances in future as territorial disputes will tend to arise not for ideological reasons but for economic reasons.

To enhance our insight into a pattern of alliances and alignments in the years ahead, we will now look at a number of developments in the ideological, economic and military realms that will shape the post cold world era or, for want of a more glamorous term, the New World Order.

## **GEOSTRATEGIC TRENDS**

### **Ideological Change**

Communist revolutionary dynamism has ground to a halt. Liberal democracy is now widely accepted, in theory if not in practice, as the most desirable social system to aim for. Nevertheless, experience in the Third World during the Cold War indicates that democracy requires suitable economic and social preconditions to take effective root — equitable distribution of wealth and income, high levels of literacy, a tradition of tolerance and few deep seated ethnic and religious differences. Therefore, on this basis there is still a long way to go before strings of bonding alliances are likely to develop throughout the Third World.

### **Economic Trends**

Today, economic power seems to be a much surer path to political influence than military might. This is particularly true of states such as the US, Germany and Japan. Now that communism is in disgrace even the Chinese have seen that market incentives and private ownership



are the best ways of directing human creativity towards wealth generation. There exists an accelerating global trend towards economic integration and intensified communications and transport usage. Economic interests are becoming pre eminent and a smoothly functioning world market must be able to provide economic growth to a multitude of developing nations which will otherwise face domestic instability from populations with growing expectations of their governments.

A breakdown of the currently favourable, open economic order must at all costs be avoided. This was a prime motivation for the Gulf War. The emergence of trade blocs is also a development to be looked at with concern. A single market EEC now exists and the US-Canada Free Trade agreement was instituted in 1988. Similar trends may develop in Asia with trade between North Asia and South Asia expected to exceed trans Pacific trade by 2000.<sup>5</sup> The economic dynamism of Asia will be enhanced even further as some of the major players, particularly Japan, shift to knowledge based forms of production.<sup>6</sup>

The advent of three major trading blocs comprising the EEC, the Americas and an Asian Cartel, perhaps centred around Japan or China or both, in the much longer term, could serve as a tripolar power structure leaving many nations out in the economic cold.

### **Military Trends**

For reasons to be discussed a major US decoupling from NATO and Japan is highly unlikely. However, the US will probably feel a much less pressing need for expensive involvement in the Third world. The Cold war 'Zero sum game' is over — one superpower's Third World gain is no longer the other's loss. The US no longer needs to court favour from third world nations as its security mission has ceased being centred around containment of the Soviets.

NATO will almost certainly exist in one variant or another for very good reasons. During the Gulf War, what was effectively a NATO style command and force structure adapted very well

to out of theatre operations and worked extremely effectively, particularly the Anglo—American forces and the naval forces from numerous NATO nations. Successful decades of cooperation, training, standardisation and shared research and development paid off in having the equipment, standard operating procedures and men to stand up to out of theatre conditions over a sustained period. This lesson has not been lost and NATO forces will take on a leaner shape based on a UK led Rapid Reaction Force comprising 50,000 – 70,000 mainly UK, US, Belgian, Netherlands, German and Turkish troops to be supported when necessary by heavier national divisions. The final shape of NATO force structure will be leaner and equipped on lighter scales. Despite recent talk of setting up a Franco-German Army or a European Army, NATO will probably remain central to Western European security for many years to come.<sup>7</sup>

Continued pressure is being brought to bear by the US for greater burden sharing from its allies. It was not happy to bear the cost of the Gulf war by itself and obtained \$37 Billion from Arab sources and \$17 Billion from Germany and Japan, with varying amounts of difficulty. It also expects Japan, Germany and the UK to take on more of their regional security burden as its own economic problems worsen. The US is simply no longer in the position to act unilaterally as the world's 'policeman'. Overall, US forces are to be cut by 15-25% world-wide by 1994, though key elements of the current force structure will remain.<sup>8</sup>

Proliferation of nuclear and chemical weapons remains of great concern to the US Administration. By 2000 twenty nations could well have nuclear weapons. What may be even more disturbing is that a terrorists suitcase carrying certain chemical/biological agents could cause at least as much devastation as a nuclear warhead. A dozen nations currently have a chemical weapons capability, with as many more actively pursuing the capability.<sup>9</sup>

Pressure for the remnants of the Soviet Union to remain militarily introspective will remain. Foreign adventures have become things of the



past as instability and nationalistic drives for autonomy tend to increase the requirement to dismember the legacies of the Soviet Union's military industrial complex. Yet, lingering doubts and fears concerning China persist in the Russian psyche. In the Far East the Russians will try to ensure continued superiority over China in the Air-Land battle, despite major troop withdrawals amounting to 13 divisions along the Sino-Soviet border. The Soviets will also try very hard to maintain secure submarine based nuclear deterrent forces in submarine bastions in the seas of Japan and Okhotsk. Appropriate forces also need to be maintained to possibly intervene in situations developing from growing ethnic, nationalist and religious unrest in the increasingly agitated and unpredictable ex southern republics and the Ukraine. These areas have no cause to love the Russians and Russian intervention could occur as a result of refusal to export food and other products to Russia.

### **Demographic Trends**

By 2025 the world's population is expected to have doubled to approach ten Billion. It is also likely that the poor will get poorer as about 84% of the world's current population live in under developed countries and this figure is likely to increase to 90% by 2025. Bear in mind this is 90% of a doubled world population. The growth in poverty and hunger could lead to large migrations of the poor to perceived rich countries, particularly from Africa, Russia and former Eastern Bloc countries to Western Europe. The beginnings of this type of migration has been seen in Europe after the reunification of Germany. Mass migrations might one day be have to be checked militarily if the stream becomes a flood. This will largely depend on the success, or lack thereof, of the Russian Republic and former members of the Soviet Union to develop viable economies.

Of course, projecting population growth over thirty years is an ambitious, not to say inherently inaccurate exercise. Numerous factors could affect the estimate such as pandemics, as yet unknown effects on food production of the Green House effect and the consequences of

nuclear, chemical and biological proliferation and conflict. Looking at the AIDS pandemic alone it is estimated that by 2000 about 40 million people will be HIV positive and this could increase exponentially unless checked. The populations of Africa and South East Asian and South American nations would be particularly hard hit.

Most of the world population increase will take place in non-Christian, non-Caucasian countries as birth rates in Western Europe continue to be negative and the US, birth rate continues to fall. Islamic populations will show substantial growth. These factors will obviously affect the potential strength of regular and reserve military forces.

### **A LOOK AT THE MAIN PLAYERS**

The trends outlined above directly affect the perceptions, motivations and long term planning of nations, particularly those who emerge as the major players or power brokers in the next century. We are emerging from a world governed by a relatively well defined bipolar power relationship to a multipolar world where power is likely to be much more diffused. Economic, technical and environmental interdependences will be multiplied giving powerful impetus to the formation of coalitions to pursue, defend or promote common interests. Besides the US and perhaps the Russian Republic, other major players are likely to be China, Japan, India and Germany. To determine the future alignments of these players and their neighbours we must now review their status, likely interests and prospects.

#### **United States of America**

Thomas Jefferson, in his first inaugural address on 4 march 1801, said that the US wanted peace, commerce and honest friendship with all nations. He added pointedly that he wanted entangling alliances with no one.<sup>10</sup> However, the US finds itself in a far different world, with the weighty obligations of a dominant superpower — global economic and political interests which must be promoted and defended. In the 1990s the US retains by far the best amalgam of economic, political, military and ideological leverages. It remains a superpower in just about every sense



and has no peer when these attributes are judged in sum. Even in its halcyon years during the 1960s the Soviet Union could only compete with the US in the military dimension being a truly incomplete superpower.

Most alliances made with the US after World War Two were made as balance arrangements due to the Soviet threat. With the dissipation of the Soviet threat it is possible that nations seeking close peacetime alignment with the US will decrease. By the same token, the US will experience less pressure to form and maintain close alliances with nations where the relationship is too one sided or asymmetric in terms of economic advantage.<sup>11</sup>

While significant US decoupling from the Third World is likely, the US will continue to vigorously pursue its strong interest in maintaining a common western prosperity. It has an abiding interest in maintaining a strong and viable Western Europe. While the three founding imperatives of the NATO alliance have eroded — the Soviet Threat, Western European dependency and American economic pre eminence in terms of the ability to bankroll — the benefits of the alliance are many as have been discussed. Moreover, the uncertainty of the political complexion of former Eastern Bloc countries and of the Russian Republic itself makes it unwise for the US to even contemplate dismantling NATO or decoupling itself from a still undefined Greater Europe.<sup>12</sup> The US is obliged to continue following a policy of active engagement.

The nexus between the US, UK and Germany will likely remain particularly strong.<sup>13</sup> Similarly, the Russian Republic is likely to maintain an accommodating alignment with the US as its great need for western capital, technology, management and food persists. Russian dependency will almost certainly spawn numerous positive entanglements with the West in general and the US and Germany in particular. The Russians will probably continue to align with the West on matters of concern such as non proliferation of NBC (nuclear, biological and chemical) weapons. Support may also be given on actions for the containment of Islamic

fundamentalism as well as counter terrorism.

The US continues to consider itself a Pacific power of the first order, especially as its population centre will have shifted to very near the West Coast by 2000. The US will also attempt to remain strongly coupled to Japan for economic reasons and the conspicuous strategic advantages offered by Japan's key position in the North East Asian security equation; as an 'unsinkable aircraft carrier' hedging in the still highly effective Russian Pacific Fleet.<sup>14</sup> However, Japan's security dependence on the US to contain the Russian threat is far less now and Japanese convergence of interest with the US is not as great as previously. Japanese response to US strategic imperatives such as burden sharing and Gulf war support have, to many Americans, seemed tardy and over cautious, reflecting a far more independent, even selfish and uncommitted Japanese attitude.

It can be concluded that a more pragmatic, less ideologically driven approach to international security will be adopted by the US. Pragmatic relations with China, Saudi Arabia and other Gulf States testify to this.<sup>15</sup> The US is much more likely to side in conflicts in accordance with its long term economic interests. Multilateral alliances with any sort of eco-cooperative connotation will be discouraged by the US. Where alliances have to be formed, a bilateral relationship with the US will be the preferred way of doing business and the US will continue to discourage the formation of multi lateral alliances.

Nations with the best ideas and products to offer the US as bases for investment and trade will get favoured status and will be taken care of. The US will support democracy and self determination abroad but will not be prepared to pay as heavy a price as in the past or form alliances, unless such alliances secure long term economic interests. The 1991 security pact with Kuwait is a case in point. This Pact gives the US further entree into the Middle East to secure its interests and deters possible Iranian and Iraqi aggression, thus assisting in maintaining the integrity of the two chief US allies in the region: Saudi Arabia and Israel. This has obvious economic benefits in the former case and domestic political spin offs



in the latter.

### **The Russian Republic**

By the early 1980s the Soviets were left with the stark dilemma of liberalising and losing political control or maintaining central control and starving. They chose the former option for better or worse.

In 1991 the Soviet Union comprised 15 republics and 104 separate nationalities, with 65 million people living outside the Russian Republic. What is left is a veritable melting pot of ancient enmities and new resentments. Trying to avoid the remnants of the Union degenerating to petty national states jockeying for advantage and influence is a prime aim of the Russian centre or Russian Republic. Moscow will continue to press for a workable and meaningful Commonwealth of Independent States (CIS) as it is hoped that the economic specialisations and web of interdependences built up over three generations will mitigate the heady romance of complete autonomy for many of the nationalities, particularly the Ukrainians.

As discussed, Moscow's convergence of interest and hence alignment with the west will probably increase. It has a vested interest in a strong and viable Western Europe, especially Germany, as a source of investment and aid. It is likely that the Russians are even prepared to accept a long term bandwagon relationship with Germany, accepting German economic hegemony over the former nations of eastern Europe, in order to ensure its own viability.

Dependence on Europe will further increase as Moscow receives cool receptions to its economic overtures in Asia. Political and economic penetration of Asia is difficult for the Soviet Union due to many factors; including Chinese sensitivity, inconvertibility of the rouble and basically unattractive Soviet products. Asian nations, such as Japan and China, have been Russia's traditional enemies and will generally treat Soviet advances without sympathy on a strictly commercial basis. The long term prospects for substantially increased economic and political

linkage between Moscow and the Asian nations tends to remain bleak.<sup>16</sup>

### **THE PACIFIC BASIN**

#### **Business as Usual**

While the Russian Republic struggles to avoid total collapse, the Middle East fretfully tries to stabilise after the Gulf War and the US gradually reduces its commitment to the Third world, the commercially oriented nations of the Pacific Rim have been conducting 'business as usual'.

Trans Pacific trade is booming. In 1988 it burgeoned to \$271 billion, greatly exceeding Trans Atlantic trade which was \$186 billion. Nations of the Pacific Rim comprise eight out of the top twenty US export markets and the nations of the North West Pacific alone produce 28% of Gross World Product (GWP). This figure is estimated to rise to 35% by the year 2000. By that time trade between North East Asia and South Asia will exceed Trans Pacific trade.<sup>17</sup>

Strategically, the US—Japan Security treaty remains the nucleus of the western security guarantee in the north west pacific. While the US will reduce its forces based in the Pacific by 10% before 1994, developments will still take place in the region against a clear backdrop of US military supremacy.<sup>18</sup>

An important factor in the Pacific Rim is the lack of strong, traditional bonding alliances or alignments in the region. Whether as a result of oriental pragmatism or mutual mistrust borne of centuries of traditional enmity, or of the ethnic and religious diversity of the region, traditional bonding alliances are not at all common in the region. Pragmatic balancing and bandwagoning tend to be the more usual bases for alliances in the Asia Pacific.

Many positive developments are unfolding in the region, particularly with the recent and still extremely fragile resolution of the Cambodian problem. In addition, there are serious attempts to normalise Russian relations with China, Japan, South Korea and ASEAN. The rapprochement



between the Koreans is also extremely promising. Nevertheless, several traditional tensions still exist as well as disputed island claims in the South China Sea and the future of Taiwan and Hong Kong.<sup>19</sup>

Important long term regional issues also come to mind: Will Japan and China end up competing for dominance of the western pacific Rim? or, with the demise of the Soviet threat, will Japan feel under less pressure to remain in the Western camp and perhaps ultimately bangwagon with China to form an immense eco-strategic bloc in the longer term? Furthermore, what are their respective national objectives and will Japan gradually convert its economic power into political influence? To gain insights into possible answers to these questions and hence clues to future regional alignments, we must look carefully at the enduring interests of, and constraints on, China and Japan.

## China

Today, one person in every four is Chinese. By 2025 one person in three may be Chinese.<sup>20</sup> The sheer size of China and its military-political potential cannot be ignored or under-estimated. China maintains the largest military forces in Asia and is able to have a decisive impact on the Asia Pacific's strategic land and seascape. It is capable of reaching complete superpower status — superpower levels of the military, economic, diplomatic dimensions of power in being — during the first half of the next century.

Old fashioned oriental pragmatism, self interest and ethnocentricity mark China's foreign and development policies. In the 1970s China shed all ideological impediments to economic growth and made the imperative of economic development second only to the need to maintain political control. This pragmatism is one of many reasons why Chinese communism tends to be more robust than the now discredited Soviet version.<sup>21</sup> While unlikely to collapse as the Soviet Union did; China needs the time, western capital, technology injections and especially western markets to reach her full potential. She is slowly, systematically and above all patiently, reaching

the target. Westerners should not assume China will decay as the Soviet Union did. The Chinese brand of para communism has been more flexible, assimilative and robust than the Soviet version.

While still having a long way to go, the Chinese economy is becoming quite robust. GDP rose annually by an average of 10% since the mid 80s. Among developing nations China was ranked eighth in 1980 as an exporter, with 7% of GNP derived from exports. In 1986 it was ranked fourth and was deriving 10% of its expanding GDP from exports. In 1990 this figure had reached over 22% with trans Pacific trade increasing by 25%.<sup>22</sup> The fact that this was able to occur under Most Favoured Nation trading status a year after the Tienanmen Square massacre is testimony to the growing importance of the Chinese economy to the US and the determination of the US to keep China within an institutionalised process of international negotiation.

Preoccupied with its four great modernisations: industrial, agricultural, scientific and technical followed by military; Beijing has for many years pursued a policy of 'equidistance' and it had an advantageous balancing role between the then heavily competing superpowers. This involved giving indications of making a form of linkage with one or the other superpower in order to increase Chinese importance to another. The 'China Card' is no longer of anywhere near the value it was to Washington during the Cold war. Similarly, China is less able to play the 'Washington card' against Moscow or the 'Moscow Card' against Washington. Consequently, China's relative power and influence on the world stage has significantly decreased. This was not helped by Tienanmen Square, but, '...Chinese leaders can continue to count on short memories and the amoral calculus of the market to work in their favour'.<sup>23</sup>

China's relations with Japan are of great importance to the long term distribution of power and influence in the Asia Pacific basin. China and Japan are traditional rivals who share deep rooted suspicions of each other. Japan respects China's power and proximity as well as its potential as an enormous market for Japanese



goods. Consequently, the Japanese will not be inclined to antagonise China by making a major commitment to developing the Soviet Far East and Siberia. This would be perceived with resentment in Beijing as 'ganging up' and increasing the insecurity of China's northern border with Russia and former Soviet eastern republics.

China remains suspicious and somewhat jealous of Japan's growing economic influence over many South East Asian countries. Japan has overtaken the US as the world's largest aid donor, with \$ 2 Billion per annum going to ASEAN countries alone.<sup>24</sup> This, coupled with massive Japanese investment in ASEAN countries, lays a firm fulcrum of economic leverage should it ever be sought to be used. Some Chinese have even alleged that Japan is trying to develop an 'East Asia Economic Circle' which can be likened to the Greater East Asia Co Prosperity Sphere' of the 30s and 40s.<sup>25</sup> Similarly, China looks with a suspicious eye on Vietnam, or the 'Smaller Dragon' as a long term competitor for influence in Indochina and other parts of South East Asia. China has a traditionally exhibited an hegemonistic attitude towards Indochina and sees a strong Vietnam as a significant countervailing force to its influence.

Beijing is, however, keenly interested in retaining an effective and cohesive ASEAN. Extremely supportive views of ASEAN have been expressed by China. China gives ASEAN credit for being '...determined to pursue a policy of balanced strength allowing the United States, the Soviet Union, China and Japan to restrain each other, thus gaining the most benefit in a situation of stability and development.'<sup>26</sup> ASEAN is seen as a countervailing influence on possible Japanese and Vietnamese power aspirations and also as a valuable source of investment, especially from the Overseas Chinese who are numerous and influential throughout South East Asia. By the same token Beijing would not like multilateral military ties transforming ASEAN into a de facto military alliance, as this would almost certainly be considered unnecessary and provocative.

While China has the respect of its neighbours by

virtue of its size, the main problem China faces is that it is simply not trusted. It has supported indigenous communist insurgency movements throughout stridently anti-communist South East Asia during the 50s, 60s and 70s.

Tiannenmen square did much to disrupt a growing climate of confidence in the region, but many other indicators exist which make regional nations wary of the 'Larger Dragon'. While it maintains a stance on the world stage that totally opposes the use of force in international relations the Chinese leadership and bureaucracy has often been seen to act in a vindictive and ruthless manner, entirely compatible with its past.<sup>27</sup> Besides Tienannmen Square, violent suppression in Tibet and the sinking of Vietnamese patrol boats in the Spratley Islands in 1988 contradicts China's lofty rhetoric.<sup>28</sup>

Beijing has few allies of any consequence other than the 'Hermit Kingdom' of North Korea, and this situation is likely to persist. Smaller countries around China, such as Thailand and Laos, are sometimes pressured into a bandwagon relationship with the Larger Dragon but these relations are pragmatic and minimalised as soon as the pressure wears off. Smaller nations are justifiably vigilant concerning the possibility of getting trodden on or digested by an uncomfortably close giant.

China has always had a deep sense of its destiny and importance in the world. Leadership of, or leverage over, much of Asia is perceived as part of that destiny. All China needs is time and a stable security environment. It is, for the moment, quite happy to maintain the environment of 'balanced strength' in the Pacific even if only until it is in a position to 'call the shots'.

## Japan

Japan continues to be an engine of economic growth that has shown no real effort to convert its financial muscle into military power, though it continues to steadily modernise its quite substantial and well equipped armed forces. The three major areas of defence activity being emphasised in the 1990s are military research



and development, recruitment of high quality personnel and US—Japan defence cooperation.<sup>29</sup>

With the Soviet Union removed from the scene Japan, like many other states, is under less pressure to remain closely tied to the camp of the Western Alliance under the traditional post war balance alliance format. Japan is able to take a more pragmatic and independent defence stance as long as China does not emerge as a looming military threat. Nevertheless, the innumerable post war economic, diplomatic and even cultural linkages (baseball, Coca Cola, game shows, hamburgers etc) built up between the US and Japan tend to guarantee close defence cooperation under the provisions of the San Francisco Treaty (1951) which encapsulates the US-Japan Security arrangement. Of course, Japan will be called upon to share more of the common defence burden and by 1995 is expected to be able to secure its own sea lines of communications out to 1000 nautical miles, defend the northern approaches to its islands and mine the four strategic straights leading to the Soviet submarine bastions in the seas of Japan and Okhotsk. The Japanese have also agreed to pay 73% of non salary costs for US forces stationed in Japan<sup>30</sup>.

Like China, Japan is distrusted and often resented by her neighbours. Lingering suspicions of Japan continue to exist throughout the Asia Pacific. Culturally, Japan remains isolated and ethnocentric and, unlike Germany, Japan is perceived to have made little effort to come to terms with its past. However, bandwagon alignments; including those which are largely economic and perhaps ultimately even feudal in nature, may be built up as Japan pours huge investments into South East Asia and Australasia. As regional 'banker' and principle aid donor, Japan will have increasing influence over regional interest rates and currencies and the pressure to fall into line with Japan's wishes will be strong.

To improve their 'image' the Japanese have adopted a policy of internationalisation or 'Kokusaika', which involves economic development assistance amounting to \$US50 billion during 1989-1994.<sup>31</sup> Ultimately the road to influence through economic clout and

philanthropy may well be seen by the modern Japanese as a surer path to success than by military might.

It is unlikely that Japan, even if it wants to, will be able to establish a real political-military leadership role in the Asia-Pacific region outside the framework of a strong US-Japan Security treaty. Outside of this involvement legitimising framework, Japanese political credentials in the region are minimal. This is another strong reason for staying firmly in the Western camp and sticking with the foreign devil you know, instead of flirting with the one you don't know, that is, China. China will likely remain a respected and feared neighbour, but to be drawn too deeply into its embrace is an uncomfortable thought for most inscrutable Japanese.

### Indochina

The framework of the Russian-Vietnamese Alliance remains strong despite a \$1.5 Billion per annum reduction in aid. The number of advisers in-country has been reduced from a 7000 peak in the mid 80s to a 1991 strength of 4000.<sup>32</sup> This is seen as more of a reflection of the Russian need for charity to begin at home than any major dilution of the alliance.

The military alliance between Vietnam and the Russian Republic is mutually advantageous. Even after having lost the basis of ideological solidarity with Vietnam — Marxism — Russia still remains a potent supporter of Vietnamese security for eminently practical strategic reasons. In the case of serious Sino-Soviet conflict to the north, a second front might be opened by a still militarily powerful Vietnam in the south. The Sino-Vietnamese war of 1979 demonstrated Vietnam's ability to inflict punishing damage on far less experienced or well equipped Chinese forces. Though Vietnam's forces have been drawn down from 1.2 million to 750,000 in the last decade, this force would require the presence of at least half the Chinese People's Liberation Army — all concentrated in the southern provinces — to contain them. In this situation an insufficient amount of Chinese troops and materiel would be available for sustained battle with the Russians



and their potential CIS partners in the Far East.

Vietnam benefits from continued military linkage with former Soviet members, particularly Russia and Czechoslovakia in terms of subsidised arms and capital equipment sales as well as trade markets. Vietnam also has few friends and an important deterrent advantage of a continued robust relationship comes in the form of the potentiality of Russian assistance during any Vietnamese conflict with China. This conflict would likely come in the form of the 'Second Lesson'. This lesson was promised by the Chinese after the Sino-Vietnamese War of 1979 if the Vietnamese did not behave themselves.

In summary, the Russians will continue to ensure the closeness and integrity of its relationship with Vietnam for conspicuous, long term strategic and traditional reasons. Whatever shape the Russian Republic and CIS ultimately takes, it will need to be able to play the Hanoi card in dealings with Beijing when the going gets tough. Of course the Moscow Card will be as treasured for use by Hanoi to inject constraints and uncertainties in Beijing's calculations and check possible longer term Chinese hegemonistic activities.

## **ASEAN**

After the North Vietnamese victory in 1975, South East Asia became strongly polarised and this led to two balance alignments. Emerging On the one hand, the stridently anti communist ASEAN nations comprising Malaysia, Thailand, Singapore, Indonesia, Brunei and the Philippines and on the other the Indochinese clique led by a triumphant and battle hardened Vietnam. ASEAN coalesced against the threat and formulated a treaty of Amity and Cooperation, working very hard to quell perceived Vietnamese expansionism through intensive consultative and diplomatic efforts.<sup>14</sup>

ASEAN remains a genuinely indigenous order dedicated mainly to socio-economic development and nation building. It was founded in 1967 on the basis of building a ZOPAN — Zone of Peace, Freedom and Neutrality. Though not a military

alliance, a growing number of bilateral military ties exist between members and suggestions have been put to the effect of developing a military dimension to the Association by forming a multilateral alliance between countries. It is unlikely that this will occur given that ASEAN has been extremely successful despite, or perhaps because of, its non military basis. This point was brought home with ASEAN's important contribution in bringing about the October 1991 Cambodian peace settlement.

ASEAN entree into Chinese, Vietnamese and Cambodian factional fora was almost certainly enhanced by its non military nature. Moreover, a multilateral militarisation would seem to be diametrically opposed to the founding ideal of ZOPAN. Formation of a multilateral military alliance by ASEAN would also be seen as provocative and unnecessary by both Vietnam and China. After all, if an ASEAN military alliance was not formed under the huge pressure the Vietnamese invasion of Cambodia in 1978 is there a truly rational reason for one being formed in an era involving far less pressure?

Another reason for the unlikelihood of ASEAN to coalesce into a cohesive multilateral military alliance involves relations between some ASEAN governments still being quite sensitive. Lingering distrust of Indonesia by the Malaysians and Singaporeans, together with Thailand's not being able to afford to offend an ever sensitive and jealous China by involving itself in an alliance bloc, constrains close multi lateral cooperation. The Philippines remains geographically isolated and preoccupied with its own internal economic, political and insurgency problems. It also lacks a significant naval capability which should form its major contribution to any multilateral alliance in this fundamentally archipelagic region.

Fears of subversion, infiltration and insurgency still exist and distract military resources from more ambitious conventional force structure schemes. Throughout the ASEAN, ethnic and religious competition continue to exist, particularly with a growing resentment by indigenous races towards the Overseas Chinese who form a major element of the richer classes,



especially in Malaysia, Singapore and increasingly in Indonesia. Disparity in wealth distribution also causes significant tension and rivalry.<sup>35</sup> Consequently, the prospects for ASEAN developing an effective, formal multilateral military alliance are slim. This is not to say that the current fabric of bilateral military arrangements between Association members will not continue to develop.

Even maintaining the high degree of cooperation evident in the last 17 years may be ambitious given the lack of 'Sovietnamese' threat and deteriorating economic growth figures. Nevertheless, concerns of Japanese and Chinese long term penetration of the region may reinforce future ASEAN cohesion by figuring prominently in the ASEAN security equation. Another factor which could affect the ASEAN security calculus involves the emergence of not so far away India as a potential player of great influence in the immediate ASEAN neighbourhood.

### India

According to a former Deputy Chief of the Indian Army, '...India has to be the dominant military power between the Suez Canal and Singapore. This requires that we have a long military reach across the oceans which can only be provided by a blue water navy'.<sup>36</sup> Naval bases exist in the Andaman Islands and construction of support facilities in the Nicobar Islands, north west of the Malacca Straits, is reported to have commenced. India, the world's largest democracy, has also demonstrated the will, confidence and ability to intervene militarily in Sri Lanka and the Maldives.<sup>37</sup>

ASEAN nations see no clear reason for India's expanding military presence and are insecure in that India sees itself having a key strategic role in South Asia and the entire Indian Ocean. Indonesia may legitimately regard India's aspiration of naval dominance to Singapore, and perceived military build up in the Nicobar Islands, with some concern as this can affect the substance of its claim to joint control, with Malaysia, of the strategically vital Malacca Straits.

## AUSTRALASIA

Australasia comprises Australia and New Zealand. These countries have been likened respectively to a 'quarry' and a 'farm' at the bottom of the world. Economic competitiveness and integration with the Asian nations to their north are major concerns for both countries as their commodity based economies suffer the strains of an unstable world market. Essentially, both countries are geographically and culturally alienated from Asia and are far from their traditional allies. Nevertheless, military linkages between both countries, their traditional allies and some South East Asian nations are and will remain strong.

### ANZAC PACT

Australia and New Zealand are developed liberal democracies which, for all intents and purposes, form a single strategic entity.<sup>38</sup> Consequently, a strong bonding alliance exists between them. They are formally allied under the auspices of Canberra Treaty of 1944 which is more commonly known as the ANZAC Pact, but close military cooperation has existed since the Maori wars of the 1840s despite occasional enmity exhibited on cricket and rugby fields.<sup>39</sup> Regardless of New Zealand's effective departure from the trilateral ANZUS alliance, Australia maintains strong defence cooperation links with New Zealand and these links are bound to increase as the two economies continue to integrate and New Zealand's military dependency on Australia increases. This growing dependence arises not only as a result of the break with the US and a lack of interest of the mother country, Britain, but also because New Zealand is faced with a major block obsolescence problem with its military equipment.<sup>40</sup> This will significantly reduce New Zealand's stand-alone self defence and surveillance capability perhaps forcing them into lower cost specialist roles when working with Australia.

### FPDA

Australia and New Zealand remain committed members of the Five Power Defence Arrangement



(FPDA) with Malaysia, Singapore and Britain. This provides Australasia with enhanced diplomatic entree into the region and remains the only enduring multilateral military alliance in South East Asia. It requires the five nations to consult one another in the event of external aggression against Malaysia or Singapore. A major element of the FPDA is the significantly improved Integrated Air Defence System (IADS) that provides a framework for the air defence of Malaysia and Singapore.

It seems that, in the view of all FPDA parties, these arrangements remain relevant and advantageous. Contests for influence in Asia have not ceased and the Malaysian and Singaporean military have demonstrated a remarkable keenness to support FPDA. For example, Brigadier General Lee Hsien Loong, the Singaporean Minister for Trade and Industry and Assistant Minister for Defence, spoke at an Air Defence seminar at HQ IADS in early 1990 saying:

*'...The combined weight of the Singapore Air Force and Malaysian Air Force cannot substitute for what is at the core of the FPDA — political and psychological deterrence. Even if no defence treaty obliged the FPDA partners to consult in the event that either Singapore or Malaysia is attacked, the very presence of forces belonging to an FPDA partner — example, Australian aircraft squadrons — must raise the possibility of a response from that partner, involving not just relatively small forces on the ground, but also potentially the remainder of its armed forces, which may be only a few hours flying time away. To take the argument a step further, some sort of reaction, or at least some visible displeasure, from the partners allies, linked to it through other alliances, cannot be ruled out. It is these imponderables that make the FPDA an important factor for stability in the...region'.<sup>41</sup>*

The sentiment above is a reference to the importance of an indirect linkage for Malaysia and Singapore to the United States through Australia with the ANZUS Treaty. This subtle entree into a superpowers ears is attractive to the

Malaysian and Singaporean partners. It keeps the US at a respectable distance and is seen as very valuable in terms of enhancing psychological deterrence if trouble arises. The value placed on Australian involvement in the FPDA was made evident by the Malaysian military which, during a tense period in 1991 between Australia and Malaysia, were very protective of the Arrangement and did not allow it to be adversely affected.<sup>42</sup> The FPDA remains an enduring and important focus for regional defence cooperation. It contributes to peace and security and, together with Australasia's valued contribution to the Cambodian Settlement, is a concrete expression of Australasia's desire to contribute to regional security.<sup>43</sup>

## ANZUS

It has been argued by a previous Australian Defence Minister that the ANZUS Treaty has become highly symbolic for regional defence policy makers and has become indirect support for their security.<sup>44</sup> During the difficulties in the ANZUS partnership concerning New Zealand in 1985; Malay, Indonesian, Thai, Japanese and even Chinese publications had expressed concern over the future of ANZUS, since the current strategic framework met their fundamental need for a secure and stable environment in which they can pursue their economic development.<sup>45</sup>

Australia's defence alliance with the US has proven to be extremely robust and continues to enjoy great popular and bi—partisan political support in Australia. Even during the latter stages of the Vietnam War and the difficult period during the mid-1980's, popular support for ANZUS never went below 70% and has been as high as 90%.<sup>46</sup> It may even be higher than this after the successful US leadership of the Gulf War effort.

The ANZUS Treaty is one of about 100 positive linkages with the US in terms of working agreements and understandings, many of which stem from the wider auspices of the Armies of America, Britain, Canada and Australia (ABCA) Arrangement of which New Zealand became an



active associate member under Australian sponsorship.<sup>47</sup> Nations allied to Australia in South East Asia and even friends in the South West Pacific for that matter, get some valuable benefits of Australia's high level of participation in ABCA.

ABCA is a little known but valuable example of a strong, traditional bonding alignment.

## ABCA

ABCA is a functional cornerstone of the Western Alliance and it commenced two years before the establishment of NATO. ABCA's aim is to '...cooperate closely in all defence matters: discussions should deal not only with standardisation, but cover the whole field of cooperation and combined action in the event of war'.<sup>48</sup> ABCA standardisation programs have proliferated to include a multitude areas of defence operational, logistical and scientific cooperation. The seven major programs are the:

- ABCA Armies Standardisation Program
- ABCA Navies Quadripartite Standardisation Program
- A U S - C A N - N Z - U K - U S Naval Communications Organisation
- ABCA Air Coordinating Committee (ASCC)
- ABCA Combined Exercise Agreement
- ABCA Combined Communications Electronics Communications
- Technical Cooperation Program (TTCP)<sup>49</sup>

By being firmly committed to ABCA, Australasia keeps abreast of the latest developments in modern western military doctrine, operations, tactics and scientific research despite its geographical isolation. A strong link with NATO developments is also forged through ABCA.<sup>50</sup> These benefits are appreciated by Malaysia and Singapore which value the expertise of Australian military forces and are happy to have an Australian senior air force officer in command of IADS as a permanent arrangement, since 1971.<sup>51</sup>

The ABCA agreement is both symbolic and extremely practical. It is symbolic of the desire for cooperation within the Western Alliance and stands for a commonality of interest and unity of

purpose. The ABCA partners have not been joined together merely by pieces of paper. The key to successful international cooperation has been tangible, free and active collaboration in war and peace, born of a general convergence of interest and ideological solidarity. Essential unity of purpose stemming from political, cultural and ideological similarity has drawn the ABCA members together to freely and increasingly associate with each other in the interests of their own welfare.

## FUTURE AUSTRALIAN ALIGNMENTS

Australia's long standing place in the Western Alliance is secured by the spirit manifested in ANZUS and the multitude of practical and mutually advantageous working relationships in the ABCA arrangements.<sup>52</sup> Australia's support for UN peace initiatives has also been second to none involving significant contributions towards disarmament and major roles in the resolution of conflict in UN peace keeping activities including, within the last five years, Namibia, the Middle East, Cambodia and Yugoslavia. In the latter two cases it is no accident that two Australian soldiers, a Major General and a Colonel respectively, were chosen to lead UN forces in extremely sensitive circumstances.

Australia's policy of defence self reliance and its geographic position demands that active measures be taken to build strong linkages with other countries in our region. Sticking with distant, old friends in an uncertain world is one thing; making new ones closer to home is another. Having solid security ties with other nations in the region and contributing to regional security is true defence in depth on a grand strategic scale.

Australia's security linkage with Malaysia and Singapore is strong under the FPDA and it is likely to continue to blossom. The fact that both Malaysia and Singapore are inheritors of the 'good, the bad and the ugly' of the British bureaucratic tradition may to some degree account for their ability to warmly embrace what is effectively a traditionally bonding Western treaty arrangement. Extending the albeit tenuous



hypothesis that traditionally Anglo—Saxon style alliances can work for ex dominions is the conclusion that Australia could and should build up political – security – economic relations with India. There are many much more practical reasons for this.

On a socio-political basis, India has shown remarkable consistency in adopting and practising liberal democratic values — freedom of the press, open government and human rights. Australians, who have fought on the same side as Indians in a number of conflicts, may share with India the role of maintaining stability in the Indian Ocean, particularly in the more southern latitudes. Indian power in years to come may also prove a valuable counterpoise for the growing might and perhaps aspirations of China in the region. India, as a prevailing and emergent power centre, with a population fast approaching one billion, will almost certainly expand its economic influence and military reach to South East Asia.<sup>53</sup>

A closer Australian relationship with Vietnam will also have benefits in terms of balancing China's potential military ambitions and give Australia more entree into Vietnamese decision making fora. Vietnam must not be left to flounder and starve, perhaps to be reluctantly drawn into China's orbit on a bandwagoning basis. Australia is building a special relationship with Vietnam based on the progress made during the Whitlam and Fraser administrations, followed up by the Hawke government with special efforts being made by Mr Bill Hayden during his time as Foreign Affairs minister (1983–1986).<sup>54</sup> In late 1986 a political report to the 6th Congress of the Vietnamese Communist Party, Australia was listed as one of five countries with which Vietnam wanted to improve relations — the others being France, Sweden, Finland and Japan, none of which fought against Vietnam during the Vietnam War. Australia is important to Vietnam for the part it can play as a respected middle power with sound relations in the region as well as being a source of aid, technical assistance and as an enthusiastic joint venture partner.<sup>55</sup>

Thus, if a convergent web of economic, strategic and diplomatic interests can be developed and

maintained with India, Malaysia, Singapore and Vietnam, Australia's fundamental security strategy of 'Defence in Depth' will have been extended on a grand strategic basis and go far beyond the basically reactive continental/air sea gap operational approach we have to date.<sup>56</sup> Regardless of what directions China and Japan eventually take, if this alignment strategy is followed, Australia will have well sound relations with two major countervailing forces to the two North Asian giants.<sup>57</sup>

## CONCLUSIONS

Nations align or form alliances to satisfy their own interests. This is as true in the New World Order as in the Cold World Order and the pre 1917 'Old World Order'. Mankind has not changed and the harmonious 'Age of Aquarius' has not arrived. We would be naive to think it had. But, with the collapse of communism, acknowledgement has been made that recognition of human individuality, market incentives and private ownership are the best ways of directing human creativity towards wealth generation. These ideals are the foundations of liberal democracy and therefore of the Western Alliance so, if nothing else, the ideological battle is pretty well over. However, the New World Order may involve more territorial disputes arising not for ideological reasons but for economic or religious reasons.

The United Nations does not hold the key to international security and the Gulf War was in many ways a special case. Nevertheless, the Gulf War may serve to indicate a greater willingness and ability of nations to join *ad hoc* coalitions for specific and pressing reasons against developing nuclear, chemical and biological threats as well as terrorism and even piracy.

The US will maintain an internationalist policy of active engagement. It has a strong economic interest in maintaining an affluent and viable Western Europe and Japan. Consequently, a major US commitment to a streamlined NATO and US–Japan Security relationship will persist. However, the US will feel less obliged to undertake involvement in the Third World now



that its expensive zero sum game with the Soviets is over. Burden sharing will become a major issue for and a prerequisite to the successful operation of existing alliances with the US.

The Commonwealth of Independent States is evolving into an unknown political identity currently with little credibility. However, it is imperative that the Russian Republic manages to sustain its integrity and stability. Otherwise, it is possible that Yugoslavia on a macro scale could eventuate given the historical, racial and religious enmities prevailing among no less than 104 different nationalities. The Russian Republic and its former satellites will likely remain distracted by internal social problems and economic reorganisation perhaps for the best part of a generation. Moreover, the Russian Republic may increasingly align with German and US interests as its economic approaches in the East are met with continued cool and unsympathetic receptions by China and Japan.

The situation in the Asia-Pacific region remains stable under a continued backdrop of clear US military superiority. The US wants to avoid countries in the region forming multilateral alliances and would prefer a comprehensive system of bilateral arrangements being made with it. But power relationships are becoming more diffused; with China, Japan and India emerging as major centres of influence. China needs time to modernise and will bide that time maintaining minimal alignment and a policy of equidistance. China is generally considered more likely to revert to old hegemonistic ways, when economically able to do so than Japan.

Despite a number of difficulties in US-Japan economic relations, Japan remains firmly in the Western camp. It is unlikely that Japan has either the intent or capability to convert its economic might into military main. Japan can only take on a political leadership role in Asia under the legitimising aegis of the US-Japan Security Treaty. It has no other real political entree despite attempting to acquire it with massive aid through its policy of internationalisation or *Kokusaika*. Another reason for continued linkage with the US is the displacement of the Soviet Union by

China as a potential, long term military threat.

Vietnam and India remain important allies of Russia as powerful countervailing forces to China. But, with a disintegrated Soviet Union, Vietnam in particular is feeling the economic 'pinch' in terms of reduced financial, material and technical aid. Vietnam must not be left out in the cold as it were. Improved linkage with Vietnam should be sought by ASEAN and Australasia. These groups should also use their entree with the United States to bring about a gradual American-Vietnamese rapprochement.

Similarly, ASEAN and Australasian relations with India should be improved given India's implicit objective of being the dominant naval power between Suez and Singapore. An alignment should particularly be cultivated by Australia as a joint partner in maintaining the relative calm of the Indian Ocean. Also, India's increasing influence in South East Asia can give Australia increased entree in the region as well as completing an ambitious strategic alignment system from the Arabian Sea through Malaysia, Singapore, Vietnam and perhaps to Japan. This may yield Defence in Depth on a truly grand scale and be of mutual benefit to all the nations concerned and our region in general.

Australia, through its long involvement in ANZUS, the ANZAC Pact, ABCA and the FPDA brings much experience and many benefits as a faithful and dependable ally to Anglo-Saxon cousin and Asian neighbour alike. Perhaps, this wide experience of the ideals and free, practical cooperation of the Western Alliance may be our best contribution to the New World Order in our region. Thus, what our philosophy should be in this 'Brave New World' is probably best summed up by Edmund Burke:

*'...Men are not tied to one another by papers and seals. They are led to associate by resemblances, by conformities, by sympathies. Nothing is so strong a tie of amity between nations as correspondence in laws, customs, manners and habits of life. They have more than the force of treaties in themselves. They are obligations from the heart'.<sup>58</sup>*

<sup>1</sup> Wolfers, A. 'Alliances', *International Encyclopedia of the*



- Social Sciences, D.Sills Ed (MacMillan, NY, 1968) p268.
- 2 Walt, S. 'The Origins of Alliances' (Cornell University Press, NY, 1987) p5. See also Snyder, G., 'Alliances, Balance and Stability' International Organisation, Vol 45, No1, Winter 1991 for a wide ranging discussion of modern alliance theories.
  - 3 See Durrell-Young, T. 'Wither Future Alliance Strategy? The ABCA Clue', Armed Forces and Society, Vol 17, No2, Winter 1991, pp277-297 for a comprehensive account of ABCA origins, programs and linkages.
  - 4 See King, R. and Saikal, A., 'The Gulf Crisis: Testing a New World Order', SDSC Working Paper 233 for an outline of US motives in prosecuting the Gulf War.
  - 5 Garten, G., 'Trading Blocs and the Evolving World Economy', Current History January 1989, p 16.
  - 6 Kasper, W., 'Implications of Economic Development for Naval Power in the Pacific'. Prepared for conference on 'Naval Power in the Pacific' conducted at ADFA during May 13-14 1991. See p 3-4 for a brief explanation of knowledge based economy. Kasper makes the point that factors other than labour and capital - such as innovation and use of better technology - is accounting for between 50-75% of economic growth in an increasing number of countries.
  - 7 Worner, M. (Secretary General of NATO) 'NATO's Changing Role in a New Security Order', International Defence Review 7/91, pp 751-753 for a succinct and authoritative outline of a viable rationale for modifications to NATO's role under the new strategic circumstances. See also Admiral Sir Peter Stanford RN(Retd) 'NATO must go' for another view of NATO's future. US Naval Institute Proceedings, March 1991, pp 36-40.
  - 8 Statement by US Deputy Chairman of the Joint Chiefs of Staff, Admiral D. Jeremiah, during keynote address at the 1991 RUSI National Conference conducted at ADFA during 27-28 October 1991.
  - 9 Ibid. Admiral Jeremiah cited a study undertaken by JCS staff analysing global trends to approximate the likely world situation in 2025. Among other things, the Admiral stated that in 20 years a total of 20 nations could have nuclear weapons.
  - 10 Cohen, J. and Cohen, M. The Penguin Dictionary of Quotations, The English Library-ELBS, Great Britain, 1968 p204.
  - 11 See Durrell Young op cit, p279.
  - 12 The pros and cons of the US maintaining strong defence links and other involvement in Europe has been the focus of widespread attention in professional circles. The following articles were the better ones in this debate: Van Evera, S., 'Why Europe Matters, Why the Third World Doesn't: American Grand Strategy After the Cold War', Journal of Strategic Studies, Vol 13, No 2, June 1990, pp1-34.
  - (a) Maynes, C., 'America Without The Cold War', Foreign Policy, Spring 1990, pp 3-25.
  - (b) Walker, J., 'Keeping America in Europe', Foreign Affairs, Spring 1990, pp128-142.
  - (c) Trevorton, G., 'Elements of a New European Security Order', Journal of International Affairs, Vol 45, No1, Summer 1991, pp91-112.
  - (d) Kaufman, R., 'A Paradigm for a Post-Postwar Order', Naval War College Review, Winter 1991, pp 83-97.
  - (e) Booth, K., 'Steps towards stable peace in Europe: a theory and practise of coexistence', International Affairs, Vol 66, No1, Jan 1990, pp 17-45.
  - 13 See Van Evera, S. and Walker, L., op cit.
  - 14 SOVPACFLT surface units and most submarine units are confined to the seas of Japan and Okhotsk unless they make the dangerous transit of the Japanese straits of Soya, Tsugaru and Tsushima. Soviet Naval Aviation support is effectively limited to a distance of 1500 nautical miles from the coast. An aggressive and well resourced US-Japanese warfighting strategy is detailed in the Maritime Strategy, a US Naval Institute Proceedings supplement, January 1986, p9. The strategy outlined is still largely extant and the aggressive nature of the strategy has been recently critiqued in Ball, D., 'Provocative Plans: A Critique of US Strategy for Maritime Conflict in the North Pacific', (SDSC, Canberra, 1991).
  - 15 To many commentators strong US support for oppressive, non democratic and still feudal regimes such as China, Saudi Arabia, Kuwait and others stands in stark contrast to its democratic rhetoric, particularly in light of perceived letting down of the Kurds after the Gulf War.
  - 16 Dibb, P., 'The Soviet Union as a Pacific Superpower' Pacific Defence Reporter, November 1984, p23. This article gives still extant reasons for low Soviet economic, military and ideological penetrability of the Asia-Pacific region. For further information on Soviet objectives and recent activities in the area see Gennady Chufurin, Deputy Director of the Institute of Oriental Studies, USSR Academy of Sciences, Moscow, 'The USSR and the Pacific Region in 1990', Asian Survey, Vol XXXI No1, Jan 1991. Also, Alagappa, M., 'Soviet Policy towards South East Asia, towards constructive engagement', Pacific Affairs Vol 63 No3 Fall 1990, pp 321-350.
  - 17 See Garten, J., op cit.
  - 18 The US will maintain Seven Carrier Battle Groups in the Pacific with Third and Seventh Fleets at least to 2000 A.D. These fleets, and their 630 combat aircraft, have been modernised during the 80s. The Carrier Air Wings alone have gone from a 20% modern classification in 1980 to an 80% modern classification at the end of the Reagan Administration. For a comprehensive account of the enduring limitations of the Soviet fleet see 'Report of the Atlantic Working Group on Security of the Seas: The Soviet Naval Challenge and Western Options' (Westview Press, Boulder Colorado, 1979) p74. and Jacobs, G., 'Is the Soviet Navy all it is cracked up to be?' Pacific Defence Reporter, December 1982-83, pp72-79.
  - 19 Findlay, T., 'Asia Pacific CSBMs: A Prospectus', ANU Peace Research Centre Working Paper No 90 details developments concerning Confidence and Security Building Measures and discusses possible flashpoints such as the Spratley's and the Koreas.
  - 20 China's population was 1.3 billion persons in 1991.
  - 21 Unlike the pragmatic Chinese hierarchy, the Soviet Union's leadership hung on to its rigid ideology too long in terms of economic reform. Many opportunities for gradual



- reform were lost under Breznev during the 70s.
- 22 Wilson J. 'Power, The Gun and Foreign Policy in China since the Tienanmen Incident', SDSC Working Paper No 232, p16.
  - 23 Levine S. 'The Uncertain Future of Chinese Foreign Policy', *Current History*, September 1989, p263.
  - 24 Snitwongse K. *South East Asia Beyond a Cambodia Settlement: Conflict or Cooperation?*, SDSC Working Paper 223, p4. This sum is part of the Japanese Office of Development Aid's \$ 50 Billion aid package for 1984-89, as stated in Endicott J. 'Grand Strategy and the Pacific Region' Institute for National Strategic Studies, Washington, 1989, p14.
  - 25 Wilson, op cit, p10.
  - 26 Ibid.
  - 27 Vietnam and China; as well as the Philippines, Taiwan and Malaysia have competing claims in to many islands and atolls in the South China Sea. In 1988 three Vietnamese patrol boats were attacked by the Chinese Navy.
  - 28 Endicott, op cit, p14.
  - 29 Ibid.
  - 30 Ibid.
  - 31 Ibid.
  - 32 PLA numbers total 2.3 million, which included 1.1 million conscripts. To dislodge Vietnamese forces from potentially occupied positions in southern china would require the presence of at least 1.5 million Chinese troops assuming a highly activated situation, involving a force of at least 500,000 Vietnamese troops. This number would be the minimum sustainable Vietnamese force with which to hold extensive Chinese territory. It assumes a Vietnamese shift from the strategic offensive to the operational defensive shortly after commencement of hostilities and seizure of limited objectives.
  - 34 This treaty is also known as the Bali Treaty (1976).
  - 35 For an indication of the large disparity in wealth distribution see 1988 World Bank study figures cited by Snitwongse K. op cit, p4. Thailand and the Philippines stand out as examples of disparity.
  - 36 Cited in Hsien Loong L. 'The FPDA and Regional Security', *Asia Defence Journal* 2/90, p 30.
  - 37 Ibid.
  - 38 The following quotes clearly indicate the strategic convergence of interest between the two countries. A previous Australian defence Minister stated that '...Australia and New Zealand are as alike as any two nations can be' in a paper entitled *The Strategic Outlook: The View from Canberra* in during an ANU seminar in 1985. Similarly, the New Zealand White Paper states that '...Australia is our closest and oldest ally...the community of interest in defence matters between Australia and New Zealand has long been recognised...The two countries constitute a single strategic entity.'
  - 39 See Ball D, Ed *The ANZAC Connection*, (Allen and Unwin, Sydney, 1985) for details of the Canberra Treaty and the history of Australian - New Zealand defence cooperation. It is interesting to note that New Zealand was part of New South Wales during the 15 month period from February 1840 to May 1841 (p 34).
  - 40 New Zealand's current major equipment assets were built in the early to mid 1960s. These include four Modified Leander Class frigates only two of which are near fully operational, at any one time. They are to be replaced by two Anzac Class frigates. RNZ Air Force C130, A4, P3B fixed wing and UH-1 helicopters are near end of life and, given the poor national economic state, are unlikely to be replaced with enough platforms of comparable capability.
  - 41 Hsien Loong L. op cit, p31.
  - 42 During 1991 the Malaysian Prime Minister, Dr Mahathir, directed that relations across the board with Australia be cooled. This was as a result of allegedly insulting comments being made by the Australian Prime Minister who, in 1986, described the hanging in Malaysia of two Australian drug offenders as 'barbaric'. However, the immediate trigger was the Australian television program 'Embassy' which was said to portray Malaysia in a bad light. Though relations were strained in a number of areas, military links did not suffer noticeably due to Malaysian defence personnel being reluctant to interfere with advantageous FPDA working relations.
  - 43 Australia's involvement in the resolution of the Cambodian problem was highly significant in terms of mediation, and the proposal of initiatives. The Australian Foreign Minister, Mr Evans had a decisive role in creating a viable framework for negotiations and in October 1991 he was nominated for the Nobel Peace Prize. Australian Army Engineer and Signals detachments will be taking a leadership role with UN forces in Cambodia in 1992. An Australian Major General will be in command of UN forces. It should also be noted that Australia gives more aid to Cambodia than any other western country (\$ 4 million). For a good summary of Australia's growing economic and diplomatic linkage with Indochina see Thayer C, in Ball D and Downes C., *Security and Defence: Pacific and Global Perspectives*, (Allen and Unwin, Sydney, 1990) pp 407-410.
  - 44 *Financial Review*, 'Beasley in Attempt to Allay ANZUS Concerns' 7 June 1985, p7.
  - 45 Ibid.
  - 46 See Bell C. 'The Ties are Stronger than we Think', *Sydney Morning Herald* 25 February 1985, p10. For a recent assessment of the prospects for the Australian - American Alliance see Albinski H. 'The Australian - American Alliance: Prospects for the 1990's' Australian Defence Force Academy Defence Paper No1, March 1990.
  - 47 New Zealand became an ABCA 'associate' member under Australian sponsorship in 1966. ANZAC forces had been operationally deployed in Vietnam for a year at this time.
  - 48 Durrell Young, T. op cit, p 282.
  - 49 See Ibid pp 282-291 for a detailed account of the ABCA programs.
  - 50 Ibid p 288 gives an example of how NATO STANAGS (Standardization Agreements) are converted to ABCA NAVSTAGS (Naval Standardization Agreements) for use by the RAN under RN sponsorship. This comprises the RAN's standardisation link to NATO and is but one example of extensive information sharing through ABCA's Information Exchange Project. Note also that Australia has observer status in the North Atlantic Assembly as a result of ABCA connections and sends a delegation every two years



51. IADS was declared operational in September 1971 under the command of a RAAF Air Marshall. Since then, Commander IADS has always been a senior RAAF officer. *Asia Pacific Defence Journal* 2/90, p32.
52. ANZUS is by no means a watertight security guarantee. According to Articles III and IV of the Treaty the parties are obliged to '...consult together whenever in the opinion of any of them the territorial integrity, political independence or security of any of the parties is threatened in the Pacific....Each party recognises that an armed attack in the Pacific on any of the parties would be dangerous to its own peace and safety and declares that it would act to meet the common danger in accordance with its constitutional processes'. Cited in *Joint Parliamentary Committee on Foreign Affairs and Defence Report on The ANZUS Alliance*, (AGPS, Canberra, 1982) p 28.
53. India's population in 1991 was 870 million.
54. Thayer, C, in Ball, D and Downes, op cit pp 407-408.
55. Ibid. BHP, OTC and WESTPAC are named as developing important economic links in Vietnam.
56. The strategy of *Defence in Depth* is described in detail in the Australian Defence White Paper, *The Defence of Australia*, AGPS, Canberra, 1987).
57. Australia has much in common with India. Both are democracies in the true sense of the word. Both have a vested interest in minimising superpower involvement in the Indian Ocean and deterring any future Chinese aggression. All Indian armed services, particularly the Navy and Army, maintain British traditions and a fundamentally western bureaucratic approach to organisation.
58. From Burke's *First Letter on a Regicide Peace*. Cited by Durrell Young, T, op cit, p277.

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