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SPECIAL EDITION

AXIS IMMEDIATE

TALLY ME BANANA!

New Zealanders love bananas; they eat them all year round and lots of them. All the NZ supply is imported – primarily on breakbulk services making monthly deliveries into the Port of Auckland. Recently Turners & Growers (T&G), a major fruit and veg importer, switched from conventional reefer to containers for its banana imports. In so doing, T&G sought smaller, more frequent shipments and its requirement was for an import supply chain that worked like clockwork.

Turners & Growers got its wish: a fantastic team effort between the importer, Axis Intermodal, Maersk Line, Interport Logistics and Rail, has set a new benchmark for speed to market. The NZ leg of the supply chain starts in Auckland with 35–40 x 40ft banana containers arriving weekly on Maersk Line's 4,100 TEU OC1 service from Balboa (Panama).

Well before the ship's arrival, Axis Intermodal Logistics has received pre-advice from Maersk of all the banana container details. Priority clearance at Axis Fergusson means the banana containers are immediately loaded onto the waiting Interport vehicles and delivered to T&G's Auckland depot within a few hours of ship berthing. Axis Intermodal's role does not stop there. Boxes for the lower North Island are transferred over to Axis Rail for Toll Rail delivery while South Island boxes are transhipped to Lyttelton.

The co-operation between Axis Intermodal, Turners & Growers, Maersk, Interport and Toll clearly illustrates Axis Intermodal's ability to achieve fastest speed to market through its provision of immediate access to the import containers. The achievement of this streamlined import supply chain also demonstrates the advantages of importing through the Auckland port.

INSIDE

GOING THE FULL TWIN-LIFT

The Port of Auckland will chalk up yet another NZ 'first' with the installation of a new Twin-Lifting software upgrade for its SPARCS container terminal, ship planning and control system at Axis Fergusson and Bledisloe terminals. This software is so new that Axis Intermodal will be one of very few terminals in the world to have it.

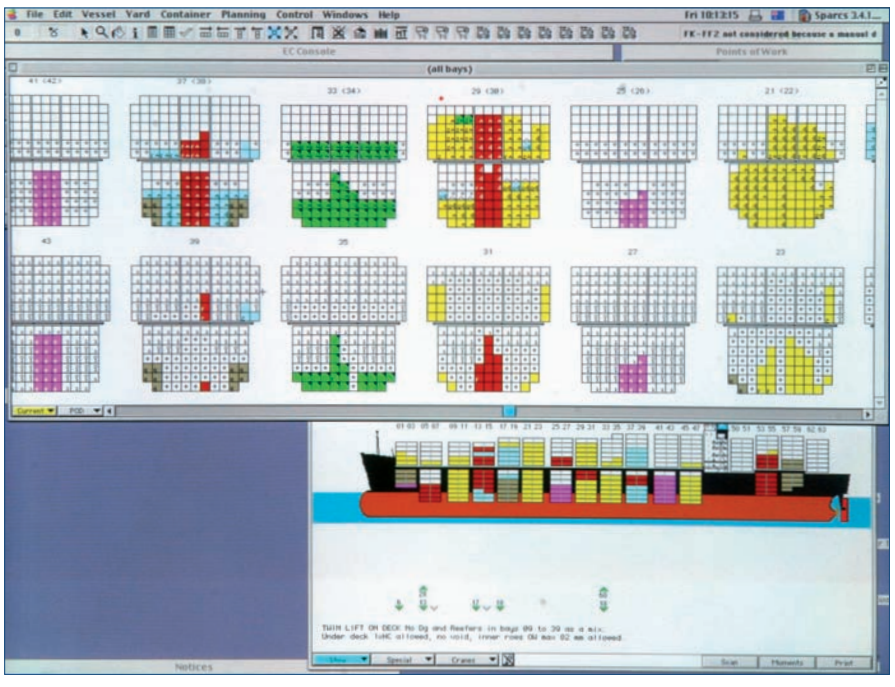
Axis Intermodal was among the first of NZ container terminals to introduce SPARCS 10 years ago. At Axis Fergusson Ship Planning and Container Control, Team Leader Sam Ewing and his crew are eagerly awaiting the new Twin-Lifting SPARCS option which will be installed any day now. "This Twin-Lift option is a major step forward for us since it brings the ability to plan for twin-lift container movement out of the yard, directly to the crane AND vice versa, without rehandling" says Sam Ewing. Since it introduced its twin-lifting container programme two years ago, Axis Intermodal has been ahead of the SPARCS software which has until now, required manual interference which even then, allowed only partial utilisation of the terminal's full twin-lifting capacity.

Until now, to achieve twin-lifting of export containers, it has been necessary to carry individual containers to the crane where they were paired up. This, says Vic Dundas, General Manager Axis Container Services, did not maximise straddle utilisation:

"We've invested substantially in our twin-lift programme – into cranes, straddles and computer software and systems. The whole point of our twin-lifting programme is that it improves our ability to offer a high level of productivity for short port stays which are essential for the large container ships and the tight schedules operated by our customers today and in the future.

"Twin-lifting is crucial to our achievement of constant improvement in productivity and service delivery to our customers. With its ability to identify the two empty slots, the new SPARCS twin-lifting software will enable one of our new generation twin-lift straddles to do the job in half the time that it took before."

View of a SPARCS ship plan



NEW
SHIP PLANNING
& CONTAINER
CONTROL

SPARCS, the synchronised planning and real-time control system, is a vital tool in yard and load planning at Axis Intermodal where it caters for the efficient stacking and exchange of the 700,000 TEU passing through both terminals every year.

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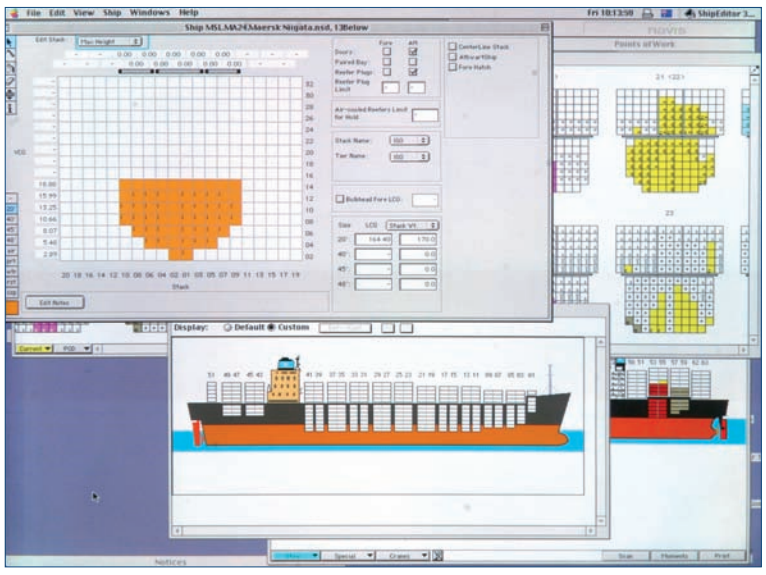
PUT A FACE TO THE NAME

SHIP PLANNING & CONTAINER CONTROL

PRECISE PLANNING



Ship Planning and Container Control at Axis Fergusson and Bledisloe is the Division responsible for planning and allocating yard slots and for creating loading and discharge plans for every container passing through the Axis Intermodal terminals.

Both Team Leaders, Sam Ewing and Angelene Powell confirm that SPARCS, the automated container terminal planning and loading system, introduced at the port 10 years ago, has transformed the processes of yard and load planning.

As Sam Ewing explains, after doing away with the coloured-pencil load planning on hard copy Bay Plans and the lengthy non-electronic communications processes, SPARCS has made it very much quicker to plan and load a vessel.

SPARCS today provides vessel planning functions that enable a model of the ship to be built showing all container slots available and the characteristics of the vessel. The planning tools allow containers to be sequenced by individual bays for both discharge and load and also, orders of work to be produced for each quay crane showing the order in which the bays are to be worked. Load sequences take account of where containers are located in the yard to minimise any 'digging' to find the next in the sequence. "It's a live-time programme which enables instant adjustments and changes and instant reordering of sequences. Under the old manual system, any changes to the plan were very time consuming" he says.

In the yard, SPARCS also provides very visual tools for planning where the containers will be placed. This allows the yard plan to be developed and monitored with automatic responses from SPARCS indicating when areas are filling up and identifying overflow areas. Yard Planning is designed to smooth the flow of containers through the terminal so that imports can be cleared and delivered to road or rail and so that exports are quickly identified and delivered speedily to the crane in the correct sequence. Effective yard planning hinges on minimal container handling. SPARCS, particularly with its new twin-lifting enhancement, minimises the number of unproductive moves at the two Axis Intermodal terminals.

AUCKLAND IS NZ'S ONLY TWIN-LIFT PORT. Twin-lifting straddle carriers and container cranes help increase productivity and achieve faster ship turnaround times for shipping line customers.

Axis Intermodal will take delivery of three new 1,150 tonne container cranes in January 2007 which will be the fastest, biggest and most productive of any NZ port.

PROJECT BOOMER

Axis Intermodal's three new STS (Ship to Shore) cranes incorporate a number of new features, some unique and one – a world first.

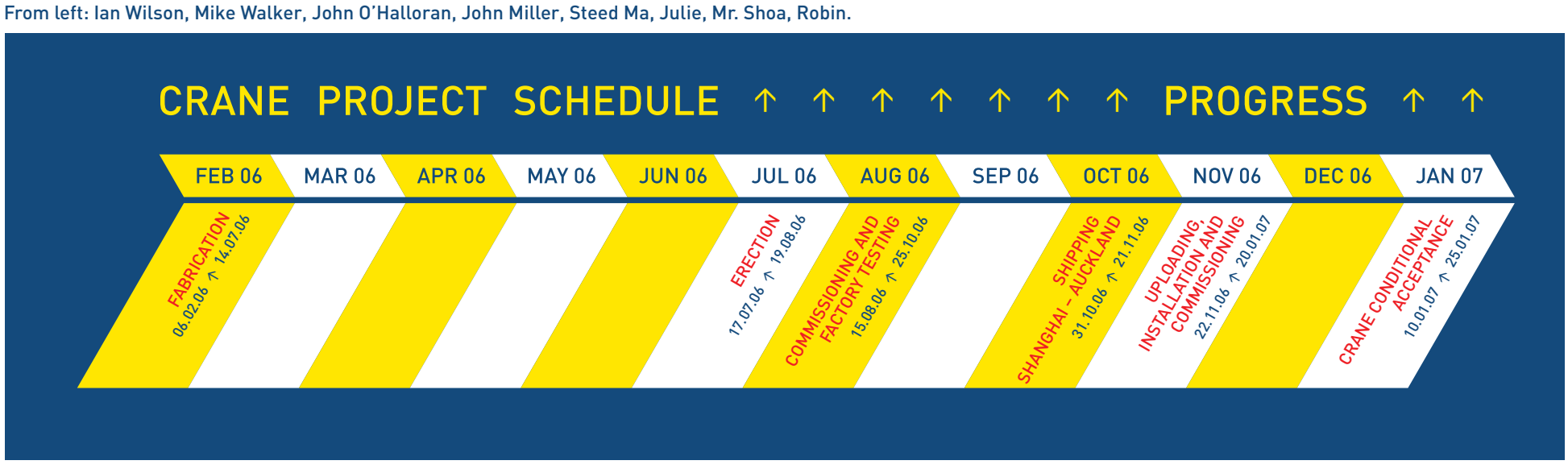
John O'Halloran and Ian Wilson are checking reports.

The main boom being lifted onto the superstructure.

The ZPMC Crane Project Team in Shanghai.
From left: Ian Wilson, Mike Walker, John O'Halloran, John Miller, Steed Ma, Julie, Mr. Shoa, Robin.

In line with the Axis Intermodal twin-lifting programme, the new cranes will all have twin-lifting abilities but they will have the additional advantage of being able to single lift 20ft containers whilst still in twin-lift mode. As Axis Intermodal Operations Engineer John Miller explains, this is a major time saver. "When a crane has to switch from twin 40ft mode to 20ft mode, time is taken telescoping the spreader and gantry travelling to the crane. Often too the crane is prevented from gantry travelling by an adjacent crane. By single lifting in twin mode, much time is saved. This is a standard feature on straddle carriers but I believe this is a world first on ship to shore cranes."

The aim is for all the Axis Intermodal STS cranes to have permanent twin-lift spreaders by 2007 and many of those will be separating twin spreaders. These have the flexibility to work on 2 X 20ft containers stowed in 40ft cells below deck as well as adjusting to handle the above deck 20 footers stowed in 45ft cells. The 5ft gap or separation between the two above deck boxes allows for access by stevedores to lock and unlock the twistlocks in between the boxes.



BIG BENEFITS FROM NEW HARBOUR CONTROL SYSTEM

ID POSITIVE

A new Automatic Identification System (AIS) automatically identifies vessels approaching Auckland Harbour and is enabling earlier, more accurate allocations of port resources for the arriving vessel.

'Hot off the press' and newly installed at the end of July, AIS is an exciting new tool for the Port of Auckland and specifically for Marine Operations Supervisor Leigh Rusbridge and her Harbour Control team who are currently exploring the system's various capabilities.

The first Port of Auckland point of contact for a visiting ship, the Marine Services' Harbour Control unit is a 24 / 7 watch and monitor operation that carries out resource planning and allocation for around 1,600 ship calls into Auckland harbour per year – between 25-32 ship calls a week.

Harbour Control (HC) allocates pilots and tugs, facilitates and monitors berth queues and schedules. Its area of responsibility extends beyond vessels visiting the Auckland port berths to include any vessel of 500GRT and over coming into Auckland harbour (500GRT being the gross tonnage break point for mandatory pilotage in Auckland harbour). This includes bulk vessels discharging sugar at the Chelsea Sugar Refinery wharf at Northcote Point; ships going into the ammunitions depot at Kauri Point and also a contract to supply tug services to the RNZ Navy vessels berthing at the Devonport Naval Base.

Given that the Harbour Control team could be juggling with 15 or more ship movements on any one day, it benefits from getting the earliest possible confirmation of ship arrival time at berth to enable the team to commence final resource allocation – pilot and tugs, to check berth availability, to create berth schedule, to nominate the vessel's position at the berth and finally to communicate all the information to Ship Planning and Operations.

Harbour Control currently uses radar to plot the passage of the ships as they approach the pilot boarding station and through the harbour to the berth. Until now, HC has made VHF radio contact with the vessel some three or four hours prior to the ships' scheduled arrival time in order to get a positive ID on the arriving vessel. That ID would then be manually flagged on the radar screen. The downside of this system was that the range of VHF signal can be negatively affected by weather making it unreliable. Also, making a positive ID became more complex and difficult when there was more than one vessel approaching at the same time. In the meantime, the radar screen was unable to pick up the vessel (or vessels) much further out than Tiri Tiri Matangi Island.

As Leigh Rusbridge explains, incorporated into the radar system, AIS removes the need to manually identify the vessels. "AIS is installed on all vessels over 500GRT. It automatically tells us which ship is approaching and how far away it is from the pilot station and what time it will arrive, based on its actual speed. Also, AIS gives us visibility of vessels as they move down past Whangarei or around the Coromandel Peninsula where it automatically provides positive identification and position details. Of course this means we can more accurately allocate the appropriate resources well in advance and with certainty."

Leigh Rusbridge – Marine Operations Supervisor.

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