

Maritime Safety Authority: Cell phone Vessel Detail System

The Maritime Safety Authority serves a wide and varied maritime community and has two simple objectives - saving lives and preventing pollution of the marine environment.

From an operational perspective, the MSA has set up safety and environmental monitoring and measuring systems for commercial operators of vessels big and small.

The MSA has 15 Maritime Safety Inspectors (MSIs) based in all major New Zealand ports, responsible for ensuring the safe operation of both foreign ships and the domestic fleet of coastal tankers, cargo vessels, car and passenger ferries, fishing and passenger vessels.

They carry out regular inspections and assessments of around 5,000 NZ-based vessels, checking on maintenance, equipment, crew health and safety and operating procedures. If a vessel is found to be sub-standard and unsafe, or is a potential threat to the marine environment, the Director of Maritime Safety has the power to detain it or impose conditions on its operation.

The MSIs work out of offices in the major ports around the country, connected to the main office in Wellington by a computer network. They essentially work independently, inspecting vessels that enter the port sporadically, along with regulars who work in and around the port. This includes fishing boats, passenger transport, tour boats, and pleasure vessels that may be hired or leased. Some MSIs look after a wider region, such as the MSI in Invercargill who works in Milford, Bluff and Queenstown.

The MSA operates a database system called Mainstay, which holds the details of all commercial vessels operating in our Safe Ship Management system, the system that sets the standard for maritime safety in New Zealand. At his desk, the MSI can call up on his computer details such as who owns a vessel, who the Skipper is, where it is authorised to operate, its weight, length and age, any safety problems it has had in the past, and when it was last inspected.

Prior to the introduction of "Cell Phone Access", the system worked well, with one large "gap". When the MSI was away from the office, he couldn't access Mainstay. When he spotted a vessel at the wharf, he could use a cell phone to ring another MSI, hoping they are sitting in front of their computer, and ask for the details. This was time consuming and inefficient and he wouldn't necessarily get the information he needs.

The Idea

What if, instead of using a cell phone to call a person, the MSI could use the cell phone to access the Mainstay database directly?

Every commercial vessel must have either an MSA or Fishing number painted clearly on it, in the same way that cars have number plates. These numbers are unique and can be used to positively identify the vessel.

Armed with a cell phone and a vessel number, the MSI needs to be able to get the vessel's details to make an informed decision on what he should do next.

The Solution

- MSI uses a cell phone to send a SMS message to a special short number, requesting information on the vessel using its vessel number.
- The SMS message is converted into a HTTP request to the MSA Web Server.
- Web services perform a security check, to make sure the MSI is authorised to access this information.
- Web services obtain the vessel information from the Mainstay database.
- The information is converted in to a SMS message, which is sent back to the originating cell phone number.
- The MSI has the information and can carry on with the job.

Results Count

John Whitely, MSI Invercargill, says this system is simply brilliant.

"I'm out on the road and spot something a bit dodgy, maybe a boat I haven't seen before and in less than a minute I can check her out. I can see if she is in Safe Ship Management, and if she's not I can call the owner and find out why not. If she is, I can see when she was last inspected to decide whether I need to follow it up."

"The budget doesn't stretch to fancy laptops with wireless connections for us at the water's edge. But we do have cell phones and we have them with us all the time. It's simple, in fact it's simply brilliant!"