


A lost case leads to blockchain case study for Philippines certificates

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Paul Gunton · 30 October 2019

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It is a scenario we can all sympathise with: there was a queue to pass through airport security and a seafarer watched his briefcase being drawn through the X-Ray machine and out of sight. A minute or so later he walked through the scanner and went to collect his belongings. But his case was not there and the security staff declined his request for a PA announcement to help find it. All he could do was to go to the lost-property desk and start some lengthy form-filling.


That seafarer was Capt Jitesh Jaipuriyar when he was a third officer. He was passing through Miami airport and the case contained – among many other things – all his certificates of competence. A few months later, his case was returned, minus most of its contents. Fortunately, the certificates remained inside but the experience has lived with him ever since.

Now he is CEO of both Singapore’s Bostomar Shipping and of the technology company Navozyme, also based in Singapore, and his Miami experience was one impetus for its blockchain solutions that [I mentioned a few days ago](#). He co-founded the company with Anjaney Borwankar, who chaired the short course I described in that item, which explored both the science behind blockchains and their practical applications, which include verifying seafarer certificates and dealing with ones that have been lost.


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Dealing with lost certificates is “a perennial problem”, according to Capt Jitesh Jaipuriyar

“This is a perennial problem [and] we need to solve it,” Capt Jaipuriyar told delegates. The technology came later: in what was, no doubt, an oversimplified account of the conversation between the two men, they agreed that “blockchain makes sense; let’s do that.”

With the Philippines a major provider of seafarers, that is where Navozyme has been working for about a year with a large number of partners to establish the country as the first country to use blockchain-based systems for seafarer certificates “and hopefully to make that an example for the world,” Mr Borwankar said.

He has also served as a ship’s officer and has seen for himself the problems that follow if a seafarer’s certificates are missing or not in order. “They can miss the window to join the ship which means that a family doesn’t eat for some time,” he said. To get duplicates from their original issuing institutions spread around the globe “can be time-consuming, expensive and stressful” for the seafarer “and cumbersome for certifying institutions to search old records to verify the seafarer’s identity,” a short video he showed suggested.

[Since early May](#), the company has been liaising with the Philippines Maritime Industry Authority (MARINA) to develop a working system based on Navozyme’s Crew Authentication Platform (N-CAP) and Mr Borwankar had been in the Philippines until a few days before the London workshop to conduct the first phase of a pilot project to set up a live connection to some of the project’s stakeholders.

It had taken some careful planning to engage the authority in the project. It was a ‘chicken and egg’ situation, he said. “As Navozyme, we can’t just go to an authority and say ‘let’s do something’ [so] we showcased what we were doing in a university,” backed by Prof Bernado Villegas, who had been part of the drafting team for the country’s 1987 constitution. He is now, among other things, a professor at the Philippines-based University of Asia and the Pacific (UA&P) and “is very influential and saw that, for the seafaring community, this kind of thing would help them tremendously,” Mr Borwankar said. Once family



A workshop in January sparked interest in blockchain solutions (UA&P image)

On 25 January, a half-day workshop of marine industry leaders, including crew managers and seafarer union representatives, [took place at the UA&P](#) to exchange ideas about blockchain and other digital transformation-related topics and “from the start, we were surprised that the reception was very strong. Some of these organisations decided immediately to do some pilots with us,” Mr Borwankar recalled, and it was from that workshop that “partnerships emerged and the pilot around seafarers’ certifications took place,” he told ShipInsight. It was the results of those pilot exercises that persuaded MARINA to embrace the idea.

The authority saw it not just as a way of making it easier for seafarers to obtain replacement documents; it also recognised an opportunity to “raise the standard of the entire country,” Mr Borwankar said, because it faced threats to its status as an IMO ‘White Listed’ training provider and concerns about fraudulent certificates.

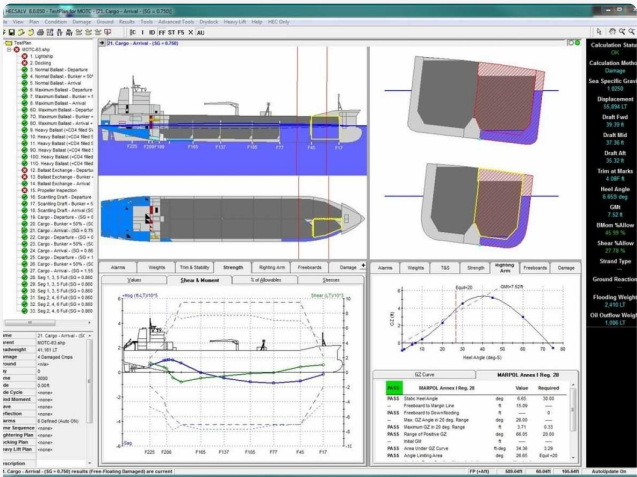
The project’s eventual outcome may not simply deliver paper documents and may not provide documents at all; that is “700-year old technology,” he said. A certificate consists of two parts, he explained: the information on it and an authority saying that the data is authentic. That second part is currently achieved using security paper, signatures and seals but “all that can be replaced digitally,” he said.

And that is how blockchain will improve security and reliability; “we have the power today to completely change the way trust works,” he said, by “tracing the certificate’s journey.” Flag administrations will no longer have to confirm certificates with training institutions and crewing agents will no longer have to double-check them with both flag and trainer – a task that can occupy large numbers of people at some crewing companies, Mr Borwankar said.

But it is a huge task to reach that goal. In the Philippines alone, “we are on a journey connecting more than 400,000 seafarers and about 600

It is a journey that owes its departure to that incident in Miami airport. Without the founders' direct experience of certification problems, Navozyme may have gone “in a completely different direction,” Mr Borwankar told ShipInsight. “Even in our mission statement we don't say we are a blockchain company. The problem and the need come first, technology second.”

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