

LIGHTHOUSE

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CALL 9

Interoperability is Crucial for Container Shipping Says MSC

Interoperability will be a key element for the container shipping industry to transform and adapt to the digital era, according to Swiss-based shipping major Mediterranean Shipping Company (MSC).

MSC is one of the four founders of the Digital Container Shipping Association (DCSA) that was officially established in April this year.

Together with Maersk, Hapag-Lloyd and Ocean Network Express (ONE), MSC wants to create common information technology standards to make the industry more efficient.

World Maritime News spoke to Andre Simha, Chief Information Officer of MSC, on the container shipping industry's response to DCSA since the partners first announced the cooperation on the matter.

"MSC has had extremely positive feedback from customers and vendors and DCSA itself has felt good vibes from a number of different carriers," Simha revealed.

"The industry realizes that the initiative behind the DCSA is necessary in order to help all actors in the supply chain to become more

efficient and improve interoperability."

"Indeed, we predict that within a couple of years everyone will become more familiar with this word, which signifies such a crucial element of how we need to evolve as an industry: interoperability," Simha, who is also the Chairman of DCSA, pointed out.

Specifically, the ultimate goals of the newly created association include simplification, efficiency for all and interoperability at various levels.

Speaking about the future of shipping and what the industry needs to change to get there, Simha said that the future "is really all about collaboration and simplification of some of the outdated processes in the industry."

He added that standardizing the way in which we communicate with others in the industry is, in part, the way to achieve this.

Related: Digital Standards Will Not Rule Out Customization

When asked about the association's plans on how to incentivize standardization besides the likely benefit of speeding up operations, Simha replied:

"The advantage of having major carriers on board is that we can

Vigneshwar-B.Tech-IV ensure that the standards we create or adopt are actually implemented. This is the weak point of some of the other associations that do not have the capacity to implement their standards."

"I believe part of the argument on standardization has already been won, among those who will be closest to the implementation of new digital industry standards, and I personally have been making the case for some time now. The DCSA will help to raise awareness of the benefits across a wider audience," he said.

As explained by Simha, digitalization means many things to many people.

"At its core, it is all about revisiting tedious processes and where possible simplifying them and automating some to improve execution speed and allow staff to focus on better service to our customers," according to Simha.

When it comes to challenges in digitalization of business operations from MSC's view, Simha noted:

"I have been through many different types and phases of digitalization over three decades of my career. The challenges today have crystallized as the necessity for digital standards."

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INDEPENDENCE DAY CELEBRATION AT RLINS



Independence Day Celebration at RLINS.Mr.M.Subramanian-Advisor-Technical delivering the speech at the parade ground . Mr.Muthu Krishnan, Principal joined the celebrations along with the members of faculty and staff of RLINS.

PASS OUT BATCH OF ETO -FEB-JUNE-2019



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Interoperability is Crucial for Container Shipping Says MSC



“As a carrier, MSC plans to ensure that the standards that the DCSA will embrace from existing initiatives, or produce afresh, will be implemented by MSC as a carrier,” he further said.

As previously announced, the association has no intention to develop or operate any digital platform.

“It’s more about ensuring that the ‘new’ digital collaboration platforms have the appropriate standards to begin with and ensure interoperability between them and the other actors in the supply chain. We all have to gain efficiencies in this mode,” Simha concluded.

Courtesy:World Maritime News Staff; Image source: Flickr – under the CC BY 2.0 license

Lack of Automation Rules a Major Challenge

Nirosh Kumar | B.TECH.IV

Finnish ferry company Wasaline is building a new RoPax ferry that will be ready for remote operations and equipped to run on liquefied natural gas (LNG), thereby making it one of the world’s most efficient and environmentally sustainable ships.

The new ferry, scheduled for delivery in May 2021, would be operated between Vaasa, Finland and Umeå, Sweden. It is being built by Rauma Marine Constructions in Finland.

Speaking to World Maritime News at the Nor-Shipping event in Oslo, Peter Ståhlberg, Managing Director at NLC Ferry/Wasaline, said that the whole concept of the automated ship is not yet completed, however, the company is working on developing and adapting it.

He explained that the major challenge of this concept is the lack of rules and regulations for automation.

With the ship’s combination of Wärtsilä’s 31DF dual-fuel engines, hybrid propulsion, and LNG and BioLNG fuel, the CO2 emissions would be reduced by more than 50 percent compared to Wasaline’s current ferry serving the route.

The ferry will be able to accommodate 800 passengers and will have 1,500 lane metres available for trucks and passenger vehicles. It has an ice class of 1A Super, helping the vessel navigate in the challenging ice conditions of the Kvarken region



Image Courtesy: Kvarken Link/Rauma Marine Constructions

as independently as possible.

The dual-fuel and battery powered vessel will also feature ABB Azipod electric propulsion system for ferries.

According to an independent study by marine consultancy Deltamarin, the system could save up to USD 1.7 million in annual fuel costs per vessel.

In June 2019, ABB launched a new series of mid-power range Azipod propulsion systems to help ferries improve energy efficiency and lower emissions.

The global ferry industry, which transports 2.1 billion passengers every year, according to trade association Interferry, is facing increased pressure to meet the International Maritime Organization’s target of reducing annual emissions by 30 percent by 2025.

“With the launch of the mid-power range Azipod propulsion, we will be able to empower more shipowners to improve the performance of their vessels while lowering environmental impact,” Peter Terwiesch, President of the Industrial Automation business at ABB, said announcing the product earlier this month.

World Maritime News Staff

Know your oceans – The International Dateline

Meenakshi Sundaram B – OFFICE SUPERINTENDENT / FACULTY



International Dateline

The International Date Line sits on the 180° line of longitude in the middle of the Pacific Ocean, and is the imaginary line that separates two consecutive calendar days. It is not a perfect straight line and has been moved slightly over the years to accommodate needs of varied countries in the Pacific Ocean. Note how it bends to include all of Kiribati in the Eastern Hemisphere. Immediately to the left of the International Date Line the date is always one day ahead of the date (or day) immediately to the right of the International Date Line in the *Western Hemisphere*.

On the time and date codes shown below, note that **Tonga** and **Samoa** have the same time but are one day apart, as Samoa is in the Western Hemisphere, on the opposite side of the International Dateline from Tonga. As you travel further west, note that the time in **Fiji** is one hour earlier than **Tonga**. You will also notice that **Hawaii**, further to the east of Samoa, is one hour later in time.

So, travel east across the International Date Line results in a day, or 24 hours, being subtracted. Travelling west across the International Date Line results in

a day being added. While the world is divided into 24 time zones, there has to be a place where there is a difference in days, somewhere the day truly “starts” on the planet.

Thus, the 180° line of longitude, exactly one-half way around the planet from Greenwich, England and 0° longitude is approximately where the International Date Line is located. Cross the line from the east to the west and a day is added. Cross from west to the east and a day is subtracted.

Without the International Date Line, people who travel west around the planet would discover that when they returned home, it would seem as though an extra day had passed. This situation actually happened to Magellan’s crew when they returned home after their circumnavigation of the earth. If you fly from the United States to Japan and if you leave the United States on Tuesday morning, since you’re traveling west the time advances slowly thanks to time zones and the speed at which your airplane flies, but once you cross the International Date Line, it’s suddenly Wednesday.

On the reverse trip home you fly from Japan to the United States. You leave Japan on Monday morning but as you cross the Pacific Ocean, the day gets later quickly as you cross time zones moving eastward in an air plane. However, once you cross the International Date Line, the day changes to Sunday. The International Date Line is not a

straight line to avoid splitting apart countries into two days. It bends through the Bering Strait to avoid placing far northeastern Russia in a different day than the rest of the country. Unfortunately, tiny Kiribati was split.

In 1995 the island country of Kiribati decided to move the International Date Line. Since



the line is simply established by international agreement, most of the rest of the world followed Kiribati and moved the line on their maps. Most recent maps show the change and you’ll see the big panhandle zigzag which keeps Kiribati all within the same day. Now eastern Kiribati and Hawaii, which are located in the same area of longitude, are a whole day apart.

Details of Container parts

Mathan Jesurayappan - ETO

Shipping Container Dimensions

Standard Shipping Container Dimensions

Container Type	External Length	Internal Length	External Height	Internal Height	External Width	Internal Width
20ft Shipping Container	20ft (6.09m)	19ft 9 inches (6.01m)	8ft 6 inches (2.59m)	7ft 10 inches (2.39m)	8ft (2.44m)	7ft 10 inches (2.34m)
40ft Shipping Container	40ft (12.18m)	39ft 9 inches (12.11m)	8ft 6 inches (2.59m)	7ft 10 inches (2.39m)	8ft (2.44m)	7ft 10 inches (2.34m)
20ft High Cube Shipping Container	20ft (6.09m)	19ft 9 inches (6.01m)	9ft 6 inches (2.90m)	8ft 10 inches (2.69m)	8ft (2.44m)	7ft 10 inches (2.3m)
40ft High Cube Shipping Container	40ft (12.18m)	39ft 9 inches (12.11m)	9ft 6 inches (2.90m)	8ft 10 inches (2.69m)	8ft (2.44m)	7ft 10 inches (2.34m)

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containers and can also modify general purpose, high cube or pallet wide containers into custom dangerous goods storage solutions.



Warning Signals on the Container Ship



Fourteen interesting facts about Chandrayaan 2 - India's moon mission to the lunar South Pole

Manikandan | B.TECH.IV

Chandrayaan-2 is an Indian lunar mission that will boldly go where no country has ever gone before — the Moon's South Polar Region. Here are a few interesting facts about Chandrayaan-2.



Photo: ISRO website



Chandrayaan-2 | Photo-ISRO/Twitter

Why is ISRO sending another 'Chandrayaan' to the Moon?

Moon is the closest cosmic body at which space discovery can be attempted and documented. It is also a promising test bed to demonstrate the technologies required for deep-space missions. Chandrayaan-2 attempts to foster a new age of discovery, increase our understanding of space, stimulate the advancement of

Why explore the lunar south pole?

Moon provides the best linkage to Earth's early history. It offers an undisturbed historical study variations in lunar surface becomes essential to do extensive mapping of the lunar surface to

technology, promote global alliances, and inspire a future generation of explorers and scientists.



Pragyan Rover mounted on the ramp projecting from out of the sides of vikram lander | Photo: ISRO

record of the inner solar system environment. Though there are a few mature models, the origin of the moon still needs further explanations.

The lunar south pole is especially interesting because of the lunar surface area here that remains in shadow are much larger than that at the north pole.

There is a possibility of the presence of water in permanently shadowed areas around it. In addition, the South Pole region has craters that are cold traps and contain a fossil record of the early solar system.

To trace back the origin and evolution of the Moon, now, it

composition.

Evidence for water molecules discovered by Chandrayaan-1, requires further studies on the extent of water molecule distribution on the surface, below the surface and in the tenuous lunar exosphere to address the origin of water on Moon.

Apart from these things, Chandrayaan-2 is -

First space mission to conduct a soft landing on the Moon's South Polar Region

First Indian expedition to attempt a soft landing on the lunar surface with home-grown technology

First Indian mission to explore the lunar terrain with home-grown technology

Moreover, India will become the



Fully integrated GSLV MkIII-M1 at the Vehicle Assembly Building | Photo: ISRO

fourth country in the world to soft-land on the lunar surface, a feat previously accomplished by only three other countries - the US, Russia, and China

Fourteen interesting facts about Chandrayaan-2

1. Chandrayaan-2 consists of three components: the Orbiter, the Lander (Vikram) and the Rover (Pragyaan). The Lander of Chandrayaan 2 is named Vikram after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.

2. Chandrayaan 2's algorithm is wholly developed by India's scientific community.

3. Unlike Chandrayaan-1, Chandrayaan-2 will attempt to soft-land its Vikram module on the lunar surface and deploy a six-wheeled Rover, Pragyaan on the Moon to carry out several scientific experiments.

Courtesy: Indiatoday.in

4. The mission life of Chandrayaan-2's Orbiter will be one year whereas the mission life of lander (Vikram) and rover (Pragyan) will be one Lunar day which is equal to fourteen earth days.

5. Apart from studying the Moon's surface, Chandrayaan-2 will also examine the satellite's outer atmosphere.

6. The Orbiter payloads will conduct remote-sensing observations from a 100 km orbit while the Lander and Rover payloads will perform in-situ measurements near the landing site.

7. Chandrayaan-2 will attempt to soft-land the lander -Vikram and rover- Pragyan in a high plain between two craters, Manzinus C and Simpelius N, at latitude of about 70° south.

8. Chandrayaan-2 has several science payloads to expand the

lunar scientific knowledge through a detailed study of topography, seismography, mineral identification and distribution, surface chemical composition, thermo-physical characteristics of topsoil and composition of the tenuous lunar atmosphere.

9. Chandrayaan 2's Dual Frequency Synthetic Aperture Radar (DFSAR) will measure the quantitative estimation of water-ice in the polar regions.

10. Its Dual Frequency Radio Science (DFRS) experiment will study the temporal evolution of electron density in the Lunar ionosphere.

11. Chandrayaan 2 Large Area Soft X-ray Spectrometer or CLASS will measure the Moon's X-ray Fluorescence (XRF) spectra to examine the presence of major elements such as Magnesium,

Aluminium, Silicon, Calcium, Titanium, Iron, Sodium, and its XRF technique will detect these elements by measuring the characteristic X-rays they emit when excited by the Sun's rays.

12. Chandrayaan 2's Solar X-ray Monitor (XSM) will observe the X-rays emitted by the Sun and its corona, measure the intensity of solar radiation in these rays, and support CLASS.

13. Chandrayaan-2 will study water molecule distribution using infrared spectroscopy, synthetic aperture radiometry & polarimetry as well as mass spectroscopy techniques.

14. The Chandrayaan-2 mission is a precursor to the ambitious Gaganyaan project, which aims to place three Indians in space by 2022.

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