• Why Inmarsat needs to migrate Inmarsat-c to a new constellation?

Inmarsat-C services need to be migrated from the I-3 satellites to the I-4 satellites because the I-3 satellites are approaching their end-of-life dates. Inmarsat has committed to continue the Inmarsat-C services beyond the expected end-of-life dates of the I-3 satellites, therefore, this service must be migrated onto the I-4 satellites.

The I-3 satellites are predicted to reach end-of-life between 2019 and 2020, depending on the individual satellite. In order to perform an orderly migration off the I-3 satellites, it is necessary to start the migration no later than 2018.

• What are the affected satellite areas?

The 4 Ocean Regions are affected.

• How the migration will be organized?

The migration will take place in 4 steps
  o Step 1: Move of AORW from the 3F5 satellite (54° W) to the 4F3 satellite (98° W).
  o Step 2: Move of POR from the 3F3 satellite (78° E,) to the 4F1 satellite (143.5° E).
  o Step 3: Move of AORE from the 3F2 satellite15.5° W to the 3F5 satellite (54° W)
  o Step 4: Move of IOR from the 3F1 satellite (64° E) the AF1 satellite (25° E).

• Where the new footprints will be situated?

The footprint of the satellites moved around 40° westward.

• What will be the name of the satellites after the migration?

The Ocean Region naming will stay the same for the Inmarsat-C network.
  o AOR-W
  o AOR-E
  o IOR
  o POR

• When the migration will take place?

The dates or periods might be changed and updated by Inmarsat at any time for technical or any other reasons. Customers and users should consult regularly the Marlink’s website to get up-to-date information about the exact planning.
  o The first migration took place on Wednesday, the 09th May 2018 at 14:00 UTC
  o The second migration will take place on Tuesday, the 03rd July 2018 at 06:00 UTC
  o The third migration is expected end of Q3-2018
  o The fourth migration should take place Q4-2018

• When the exact date of each step will be communicated to the users?

Final dates for the transfer of services to each I-4 satellite will be confirmed by Inmarsat approximatively 4 weeks prior to start of the migration.
• What will be the impact of the migration to my Inmarsat-C terminal?

During normal operation, a terminal is “logged in” to an Ocean Region. When moving into the coverage of another Ocean Region terminals may switch to other region automatically. Due to regulation, GMDSSS or SOLAS terminals will provide an alarm when this occurs and require manual intervention to switch Ocean Regions (Log in).

As a result of the migration the footprint of the Ocean Region changes. As a consequence, a terminal may find itself out of the coverage of the Ocean Region it was originally logged in to.

• I’m using a very old Inmarsat-C terminal, will it be affected by the migration?

The terminal manufacturers have been contacted by Marlink and by Inmarsat. They assume that all Inmarsat-C terminal will continue to work properly after the migration. However, we cannot anticipate how the very old Inmarsat-C terminals (15 years old and more) will react during and after the migration. Therefore, it is strongly recommended to consult the manufacturers and/or the local resellers.

• Do I need to do something before the migration on my Inmarsat-C terminal?

Mobile users that reside in the area that will not be covered by the new footprint Ocean Region after migration are encouraged to switch their terminal to another region before the migration occurs.

• Is the SafetyNet service affected by the migration?

The migration will not affect seafarers receiving MSI as the Inmarsat-C and Mini C terminals will not be affected. Seafarer can continue to select the NAVAREA and METAREA regions they want to receive MSI from. Under strict supervision of International Mobile Satellite Organization (IMSO), Inmarsat Safety Team will closely monitor the migration ensuring the 99.9% service availability level is met.

• What will change on the terrestrial side for SafetyNet Service Provider?

During the migration of I3 to I4, SafetyNET information providers, such as Maritime Safety Information Providers (MSIPs) and Maritime Rescue Coordination Centers ((M)RCCs) that broadcast EGC messages, may have to make minor changes to ensure all messages are broadcast over the correct satellites to their area of responsibility.

It is strongly recommended that all MSIPs and MRCCs that currently use the SafetyNet system for broadcast of EGC messages, contact Marlink to request confirmation that Marlink will continue to cover their Navarea/Metarea or area of responsibility, during and after the migration process.

• How the SafetyNet Service Provider will be informed?

All Navarea and Metarea coordinators will be contacted individually through the International SafetyNet Co-Ordinating Panel to discuss the actions that are required for each of the migration steps.
• **Is the Distress Alerting affected by the migration?**

The Distress Alerting service will not change and is not impacted by the migration. Alerts will continue to be handled by the Land Earth Stations in each region and automatically routed, with the highest priority, to the associated Maritime Rescue Coordination Centre (RCC)

Please note that GMDSS certified terminals will always handle Distress alerts, even if they are not logged in to an Ocean Region

• **What will be the impact on Inmarsat-C messaging?**

Inmarsat-C terminals shouldn’t be affected by the migration for messaging services. Inmarsat-C terminals are designed to work within any Ocean Regions. If during the migration a terminal moves out of the footprint of the satellite, it may select the nearest satellite and continue to operate. Mobile user should check if their terminal is logged into an Ocean Region.

• **Do I have to change parameters on my Inmarsat-C terminal?**

Assuming that the terminal is logged in into an Ocean Region, there is no impact on the terminal side. Mobile users can continue to send messages in the same way as they are used to do.

• **As an Inmarsat-C terrestrial user, do I need to change something?**

There is no impact on the terrestrial side assuming the terminal is logged in into an ocean region. Terrestrial side senders can continue to send and retrieve their Inmarsat-C messages in the same way as before.

• **Is the migration required a specific preparation?**

In principle no preparations are necessary. However, mobile users that reside in the area that will not be covered by the footprint of the Ocean Region after migration are encouraged to switch the terminal to another region before the migration occurs. Terminals which do not change footprint do not need to take any actions.

• **After the migration, do I need to change parameters on my Inmarsat-C terminal?**

In principle, no actions are required after migration. However, to ensure correct working Terminal users may want to check their terminal if it is logged in onto an Ocean Region. As a precaution, terminal user can reboot their terminal or enforce an Ocean Region log in.

• **How long the switch will take?**

Inmarsat will try to make the switch as short as possible to avoid significant disturbances. Inmarsat expects an outage of 30 minutes maximum.

• **I'm receiving EGC/FleetNet regularly, do I need to change something on my terminal?**

Assuming that the terminal is logged in into an Ocean Region, there is no impact on the terminal side. Terminals will continue to pick up the broadcast messages that are intended for the groups they are part of.
• **As EGC/FleetNet sender, do I need to change something in the way I send EGC messages?**

FleetNET messages are sent per Ocean Region. The sender of the messages determines in which Ocean Region(s) the group of terminals they want to address reside and will need to send out the message in each of the regions.

The migration will effectively change the geographical footprint of each Ocean Region. Consequently, the FleetNET user may need to send its broadcast messages in different Ocean Regions than before.

• **In terms of FleetNet distribution, how to be better prepared?**

Mobile users that reside in the area that will not be covered by the footprint of the Ocean Region after migration are encouraged to switch the terminal to another region before the migration occurs.

The FleetNET user (i.e. the sender of messages) needs to determine if the terminals they want to address have changed Ocean Region. If so the FleetNET user will have to send messages to more/different ocean regions.

• **Do I need to perform checks after the migration, if I deal with FleetNet messages?**

Terminal users need to log in into an Ocean Region and FleetNET users need to determine to which Ocean Region they want to broadcast their message.

• **How Polling and Data Reporting services will be affected?**

The DNIDs are stored in the terminals memory on a per Ocean Region basis. An active terminal is always “logged” into one of the four Ocean Regions. Its data reporting behavior is based on the DNIDs and associated parameters configured for that Ocean Region. A particular DNID configuration may not be present in the terminals for all Ocean Regions and the data reporting behavior may differ per Ocean Region.

The effect of the migration is that the footprint of Ocean Regions will move in a westerly direction. A terminal logged into the migrating region may find itself out of coverage after the migration and must log into another region. Consequently, if a terminal is not configured, or configured differently for the “new” Ocean Region the terminal may stop sending out reports or in different time intervals.

• **What are the changes expected for the terrestrial users, dealing with Polling and Data Reporting?**

On the shore side, nothing will change. Data Reports will continue to be delivered according to the DNID configuration of the Ocean Region the terminal resides in (provided the terminal is logged in to the Ocean Region). Also for sending Polls to the terminals, no changes are expected.

If large amounts of polls from multiple LESO’s need to be transmitted right after the migration, the polls will be queued by the NCS and handled in sequential order; this may cause some delay.
• Is it possible to anticipate avoiding an outage after the switch?

Yes, you can anticipate to a certain degree. Before a migration and if your vessel is in an area impacted by the switch (for instance, if your mobile is located between 20° E and 20° W when the AORW will be switched), you can force a log-in of the mobile on an adjacent Ocean Region and declare this new Ocean Region as your preferred one (for avoiding the mobile to automatically switch again to the previous Ocean Region). This is a manual and local operation done onboard by the captain.

• How to be sure that a mobile will continue to work after the switch?

To make it work after a switch the DNID must be operational in all Ocean Regions or at least in the new Ocean Region the mobile will operate after the switch. If the DNID has been already recorded in the past on 2, 3 or 4 Ocean Regions, then you are safe! After the switch, the mobile will continue to work on the new Ocean Region and the switch will be transparent. If it is not the case and if the DNID is recorded on one Ocean Region, then you will have to download the DNID and its parameters after the switch.

• After a switch a mobile does not report anymore, why?

The DNID is not recorded on the new Ocean Region
➢ the owner of the DNID must download the DNID on the new Ocean Region or ask Marlink to do it.

The DNID is recorded on the new Ocean Region but it is not programmed to automatically report
➢ the owner of the DNID must send to the mobile 2 poll commands (one containing the scheduling program and one for making it start).

• After a switch, poll commands are not received by mobiles, why?

After a switch, we might face a situation where the ship’s owner around the globe will try to send poll commands to their ships or their fleet. The massive number of poll commands will generate a long pending queue at the NCS level. Poll commands are treated one by one by the NCS in order of reception. Poll commands might be delayed or lost ➢ to avoid a long pending queue at NCS level, customers must be patient because the treatment of poll commands might take time (possibly several hours). To avoid a massive number of waiting poll commands and the creation of loops, it is strongly recommended to stop the usage of automatisms or robots which are programmed to automatically send poll commands if an acknowledgment from the mobile is not received in a pre-defined time-frame.

• What will be the impact on SSAS services?

The Ship Security Alert System (SSAS) is a covert alerting application that resides in terminals that support SSAS. It is based around a number of pre-configured destinations, to which an alert can be sent. The application uses Inmarsat-C messaging with normal priority. To the Inmarsat-C network as such SSAS messages are standard store-and-forward messages. The terminal needs to be logged in to an Ocean Region for sending the message. All implications discussed in section 7 apply
• **How can I get more information about the migration?**

Marlink encourage you to consult regularly the Marlink’s website to get fresh and up-to-date information.  
[https://marlink.com/inmarsat-i4-migration/](https://marlink.com/inmarsat-i4-migration/)

Marlink will regularly inform users, services providers and Inmarsat-C partners via Info Flash and targeting news.  
Marlink Service Desk is ready to answer your questions or to involve Inmarsat-C experts within the company. Do not hesitate to contact them for any questions or comments about the migration  
Inm-c.migration@marlink.com

• **What are the Marlink’s commitments?**

Marlink would like to assure his customers and partners that a vast and long-term planning process has taken place with regards to the planned I4 Migration process by Inmarsat. A number of considerations, potential issues and technical aspects have been reported in advance to Inmarsat by our Engineers and Inmarsat-C Experts  
Whilst we work in very close coordination, ultimately the migration process is under the control of Inmarsat. Therefore, despite Marlink’s efforts and specialist support to ensure a smooth a migration a 100% predictable outcome cannot be guaranteed. However, as always, Marlink’s dedicated support team will be available throughout the migration phases to support and help partners and end users and will continue to put professionalism and exceptional customer support at the forefront for our customers and partners!

• **I have detected an area where the Inmarsat-C coverage might not be provided after the migration, what do I need to do?**

Lack of coverage or substantial changes affecting Inmarsat-C usage and users must be reported to Marlink who will take the appropriate measures to inform Inmarsat immediately.
If you have any questions, please contact your Key Account Manager or Marlink Service Desk:

Email:  inm-c.migration@marlink.com
EMEA:  +33 (0)1 70 48 98 98
Americas:  +1 (310) 616-5594
            +1 855 769 39 59 (toll free)
Asia Pacific:  +65 64 29 83 11