EGC-API CG progress report

Submitted by Australia (Australian Maritime Safety Authority)

	SUMMARY
Executive Summary:	This contribution provides an update to WWNWS on the progress of the EGC-API CG, challenges encountered and next steps.
Action to be taken:	Paragraph 8
Related documents:	Summary Report of WWNWS11 (WWNWS11-2019); NCSR 7/9/4, 7/14/3 and 7/23; IMO/ITU EG 16/INF.2

1   Background:

1.1   The eleventh meeting of the International Hydrographic Organization (IHO) Sub-Committee on the World-Wide Navigational Warning Service (WWNWS-SC) agreed to (refer to paragraph 3.5.1 of the Summary Report of WWNWS11 (WWNWS11-2019)):

> *"… establish a correspondence group (CG) to explore the feasibility, creation and implementation of an API in order to allow NAVAREA and METAREA Coordinators to use only one interface for the broadcast and monitoring of their warnings."*

1.2   The NAVAREA X Coordinator (Australia) agreed to lead the correspondence group with assistance from the NAVAREA XVII and XVIII Coordinator (Canada) – see contact details in paragraph 6.

1.3   Membership of the correspondence group includes representatives from NAVAREA, METAREA and RCC coordinators, Inmarsat, Iridium, Cospas-Sarsat, IHO, International Mobile Satellite Organization (IMSO) and the World Meteorological Organization (WMO).

2   Expectation:

2.1   The Enhanced Group Call (EGC) Application Programming Interface (API) Correspondence Group (EGC-API CG) is to develop a machine-to-machine standard to support the transfer of EGC shore-to-ship information, including its required messaging instructions, between certified and registered EGC providers and recognized mobile-satellite service providers.

2.2   The scope of work limits usage to shore-to-ship information exchange. This means that the standard is not applicable to ship-to-shore distress alerting (and hence SAR

application). Further, implementation of shore-to-ship SAR-related information is not within scope.

2.3   The scope of work is also limited to machine-to-machine transfer of information in accordance with the guidance and guidelines of the IMO, WMO and IHO. Critically, the standard only envisages communication using C code addressing and 'ascii' format bulletins. Use of the API for other protocols and message formats (like S-100), would require a change in international guidance which is not within scope.

2.4   Implementation of the API benefits the NAVAREA and METAREA Coordinators who intend to integrate the transfer of machine-to-machine shore-to-ship EGC information into an information management system (or similar). This means a single user interface could be developed by MSIP to enable their operators to draft a single message for broadcast that can then be sent (machine-to-machine) to each RMSS provider (as appropriate) for transmission.

2.5   The API standard will not be able to respond to the concerns of all NAVAREA and METAREA Coordinators. It will not mandate implementation by an RMSS provider (or MSIP), nor will desirable requirements be mandated (or implemented by all RMSS providers).

2.6   The API standard will not include, amongst other matters, a user interface, error checking or training for MSIP. This will be the responsibility of MSIP to develop to meet its own requirements. The standard requires that RMSS providers make available implementation and related documentation that is sufficient to enable MSIP to implement the standard.

3   Status:

3.1   Australia established a SharePoint site for document management and record keeping (https://100255.sharepoint.com/teams/egcapiwg/). The Chair provides access permissions to the SharePoint site.

3.2   The EGC-API CG has met five times. The focus of those meetings was to:

- develop and adopt the Terms of Reference
- develop and adopt a work plan
- develop and adopt essential requirements
- develop desirable requirements

3.3   The second meeting approved the Terms of Reference (ToR), subsequently approved by the Chair of WWNWS-SC. The ToR were disseminated by the IHO Secretariat for review by members of WWNWS-SC and Worldwide Met-Ocean Information and Warning Service (WWMIWS) and adopted on 12 March 2020 (refer to Annex A).

3.4   The third and fourth meeting progressed development of the work plan (paragraph **3.a.** of the ToR) and essential requirements (paragraph **3.b.** of the ToR). The work plan (refer to Annex B) highlights the actions requested in the ToR and expectation of when that work will occur. It includes development of test plans and test messages, but does

not place requirements on the RMSS providers to meet timeframes for development of their own API.

3.5 In identifying the essential requirements of the standard, the EGC-API CG cannot mandate new requirements on MSI and RMSS providers, but some aspects of an API implementation are required, for example, authentication and documentation (refer to Annex C).

3.6 The fifth meeting adopted the work plan and essential requirements (refer to Annex B and C). There was discussion on the ability to enforce requirements on the RMSS providers to implement a single standard, rather than individual solutions. To achieve this, the scope of work would require amendment through IHO, WMO and IMO, and possible development of an IMO performance standard.

3.7 The meeting therefore agreed that the RMSS providers should implement an API as they see fit, meeting the requirements of the IMO, IHO and WMO, in accordance with the standard agreed in the EGC-API CG submitted to WWNWS, providing the necessary documentation to enable MSIP to implement it.

3.8 The ToR acknowledge that the standard should enable RMSS providers to develop and implement system-specific elements. Finalization of the desirable requirements (paragraph **3.c.** of the ToR) are expected to be completed at the sixth meeting (refer to paragraph 5.1).

4 Challenges:

4.1 The correspondence group have commenced discussion about future update and administration of the standard. WWNWS 'owns' the standard, but it is also a collaboration with WWMIWS. Further discussion will occur in the correspondence group and report to WWNWS.

4.2 There is a view that the API will solve interconnectivity and interoperability issues highlighted in the IMO and other international forums. As noted in the ToR (refer to Annex A), and paragraphs 2.1 thru 2.6, the standard is only intended to support the transfer of EGC shore-to-ship information, including its required messaging instructions, between MSI and RMSS providers.

4.3 Despite this, how and when to progress development of a ship-to-shore capability, and support for shore-to-ship SAR-related information broadcast, remains. This work is unlikely to be possible within WWNWS, but the documentation and framework developed by the EGC-API CG will be relevant.

5 Next steps:

5.1 The sixth meeting of the EGC-API CG is scheduled for Tuesday, 13 October 2020 at UTC 1900 – 2000. The meeting aims to:

- adopt the desirable API requirements developed by the membership;
- commence a compliance check to identify IMO, IHO and WMO requirements and how they can be met/tested; and

- commence development of a functionality testbed.

5.2   The intention is for the EGC-API CG to complete its work by 6 April 2021.

6   EGC-API CG Contact Information

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7   International engagement

7.1   The International SafetyNET Coordinating Panel[1] (NCSR 7/9/4, paragraphs 2.1 and
       2.2) and Australia (NCSR 7/14/3 paragraph 11) provided input to the seventh session of
       the Navigation, Communication and Search and Rescue Sub-Committee (NCSR). This
       encouraged discussion on the development of a technical solution for the reception and
       dissemination of MSI and SAR-related information over different recognized mobile
       satellite services (NCSR 7/23, paragraph 9.31).

7.2   Australia indicated that it would keep the IMO informed of progress, and subsequently
       provided an update to the sixteenth meeting of the Joint IMO/ITU Experts Group on
       Maritime Radiocommunication Matters (IMO/ITU EG 16/INF.2).

8   Actions requested:

       The Sub-Committee is invited to note the information provided and take action, as
       required.

Annex(es):

A.   Terms of reference
B.   Work plan
C.   Essential requirements document

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[1] From 1 January 2020, the Panel was renamed as the *IMO Enhanced Group Call Coordinating Panel*.