

**5th HSSC MEETING**  
**Shanghai 5-8 November 2013**

**Paper for Consideration by HSSC**

**Report of the S-101 Impact Study – FR views on the way ahead**

<b>Submitted by:</b>	France
<b>Executive Summary:</b>	This paper reports on the S-101 Impact Study as prescribed to TSMAD by Resolution 2/2007 and provides additional suggestions
<b>Related Documents:</b>	Actions HSSC3/09 and HSSC4/07 Document HSSC5-05.1B – S-101 - Value Added Roadmap
<b>Related Projects:</b>	

### **Introduction / Background**

An impact study has been conducted by TSMAD in accordance with the requirements of Resolution 2/2007. A survey was sent to stakeholders' community in order to get feedback and draw a global mapping of critical paths to support the transition S-57 to S-101. This paper compiles and analyses the answers collected within it. As this survey is just part of the S-101 impact study, France makes some suggestions to consider a follow-on of this S-101 impact study in order to provide decision aids to the different stakeholders.

### **Method used for the survey**

All stakeholders' parts answer the survey:

- ECDIS Manufacturers
- Hydrographic Offices
- Mariners
- RENCs and VARs
- Ship Owners
- Software Producers

The survey is divided in more or less sections, depending of communities:

- General questions
- Technical concepts
- Data distribution
- Timeframe for transition
- Business aspects
- Any other suggestions

A high level overview of S-101 and its potential impact on various stakeholder communities has been posted on the IHO website. An IHB letter S3/8151/TSMAD dated 13 July 2012, has been sent by e-mail to IHO list of stakeholders. The survey was available online from 13 July to 29 November 2012 at <https://www.surveymonkey.com>

The participation ration for HO is 27% (22/81 MS). Analysis is based on scrubbed 161 responses, reports have been posted online, some highlighted and focused points are presented in the attached presentation and summarized as follow:

### **Results of the survey**

As S-101 doesn't address most of the actual frustrations of mariners, there is no enthusiasm from them, and as a consequence, ship owners are not encouraged to upgrade (at any price).

Nobody knows precisely the economic cost of transition from S-57 to S-101. Timeframe for transition, from HO points of view, varies considerably, from 1 month to 15 years, depending on HO' ENC's coverage and S-57 experience. Most of stakeholders have foreseen impact on legacy systems and the overhead due to a dual production. There was a large debate on SI/SD concepts as there were many unknowns and risks attached to.

Every people would be keen of an overall roadmap, including their concerns and procedural delays from an IMO and IEC perspective.

### **Analysis/Discussion**

Many investments have been made to design S-101 product specification and to make it far better than S-57. So what should be done to convince the stakeholders' community to go further?

S-57 to S-101 transition should be as transparent as possible for all parts. Forwarding the survey, France provides the following suggestions for the consideration of HSSC members.

- Simplify S-101 concepts to limit risks and stakeholders overhead: A basic application scheme would be easiest to produce (as a direct result from the impact study, SI/SD concept has been removed from S-101). A clear separation between semantic and portrayal would share efforts between ENC's producers and OEMs.
- Implement S-57 to S-101 converters in legacy systems and preserve backward compatibility: Converters are enablers for transition. It is essential to assess precisely converters possibilities and limitations and to deal with HO's liability issues they may cause.
- Invest time for tests to save money later: During OEM implementation, IHO should provide assurances that the only major changes that will happen are new versions of the catalogue. To secure this, software/hardware manufacturers and IEC representatives must commit actively in testbed. Despite this, IHO might produce costly editions / revisions of S-101 unbearable by stakeholders' community.
- Cross match S-101 functionalities with IMO gap analysis and mariners' frustrations: All S-101's benefits don't profit directly to mariners, otherwise to software/hardware manufacturers. Many mariners' requirements will be met out of S-101 functionalities, depending on how OEMs implement ECDIS.
- Balance efforts between S-101 development, maintenance of current standards, and highly expected e-Nav products: Especially as S-57 seems to live for a long time with S-10\* family.
- Consider IMO and IEC procedural delay in S-101 schedule; shorten delays by involving IMO and IEC well in advance (testbed).
- Consider very carefully HO's current and future capabilities and will, for the implementation a new production and sustainable chain in order to make sure that the IHO member States will be able to provide a pretty comprehensive coverage of new S-101 products, as soon as it comes into force.

### **Conclusions**

S-101 is much more challenging than S-57. Even if S-57 coverage isn't completed worldwide, vectorial products have become a reality. There will be less difference between S-101 and S-57, than in the 90's, between S-57 and paper chart or raster products. S-101 don't introduce a big technological breakthrough from the end-users' perception.

As a consequence cost benefits for every stakeholder are not crystal clear. A complete economic analysis should be considered. This goes quite beyond the capability and scope of TSMAD, which is fundamentally a technical working group, who would not have the knowledge or experience to undertake such an exercise. However, develop a new S-101 instead of an upgraded S-57 doesn't make sense outside S-10\* family prospects. This is perhaps the key challenge faced by TSMAD.

### **Recommendations**

France suggests the S-101 impact study to be enlarged based on the suggestions made above. As a follow on, the study should be outsourced based on specifications that could be drafted by the TSMAD, then approved by the IHO MS. The final impact study, including recommendations to HO's, should be reported at the next EIHC (October 2014).

**Justification and Impacts**

These recommendations could perfectly accommodate with the S-101 development cycle and there is no need to modify TSMAD work plan with new work items.

**Action Required of HSSC**

The HSSC is invited to:

- a. endorse this report
- b. agree these recommendations
- c. take any other action as appropriate