NIPWG10-11.5.3

## Input paper for consideration by NIPWG

## A review of which services should consider using S-128

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| Submitted by: | Finland and IEC |
| Executive Summary: | A review of which services should consider using S-128 |
| Related Documents: | HSSC15-05.3A (NIPWG report at HSSC 15) |
| Related Projects: | S-128, Classification of S-100 based products and services |

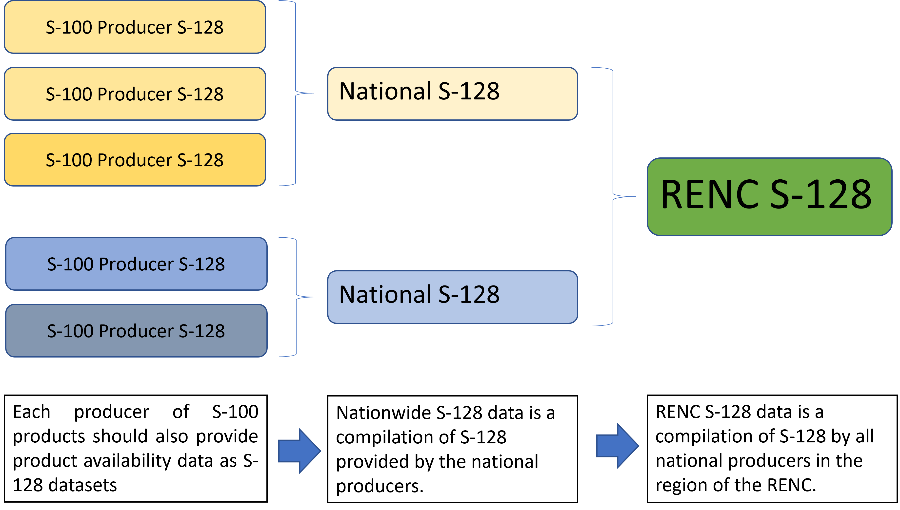
## Introduction / Background

During S-128 related discussions at NIPWG 9, an action to review which services should consider using S-128 products and services was proposed. Once the review is complete, NIPWG will communicate through IHO secretariate with relevant bodies/organizations to see how they may consider S-128 as a tool.

*ACTION ITEM 18 - A review of which services should consider using S-128 products and services will be completed by SE and HP. NIPWG-10.*

Even though the current version of S-128 is more focused on products provided as datasets, this paper assumes a future version of S-128 to be suitable also for indicating the availability of services. This assumption is based on discussions during the S-100WG TSM9, which revealed that the product specification needs some modifications to support real time data service description.

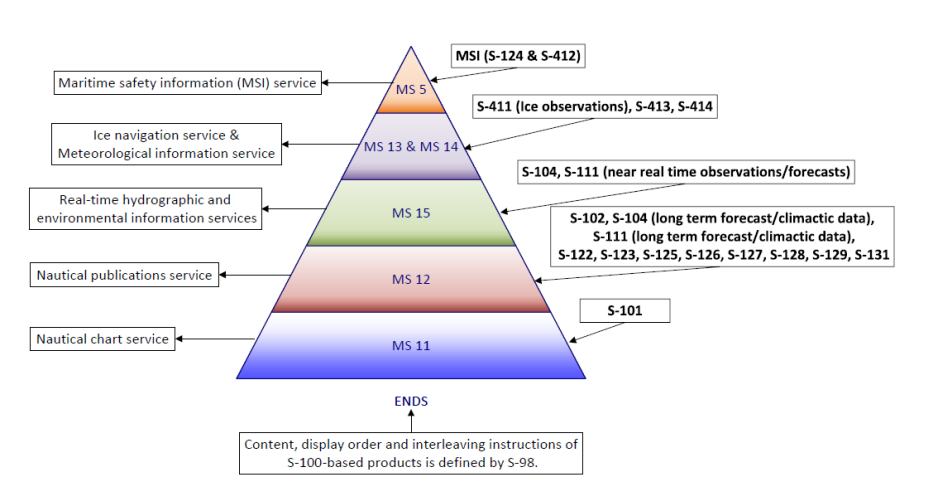
The report by NIPWG at HSSC 15 included a diagram describing the role of S-128 in potential scenarios of ENC and ENDS services. The core thought described was, that each provider of selected S-100 products or services should also provide accompanying S-128 data to describe the service. Multiple datasets could be compiled as needed to create national- and regional (RENC) datasets. The S-128 task group is working on the details of how to validate S-128 products from all relevant producers, and currently consider producer codes as the leading candidate to do so.



The purpose of this review is then to identify the relevant S-100 products and services, that should be included in a nationwide compilation of S-128. Producers of these S-100 products and services would be obliged to also produce S-128 to describe the service. Where the word *service* is used in this paper, it should be understood to include both products and services.

## Analysis/Discussion

NIPWG works on a related action to classify S-100 related products and services. At HSSC 15, NIPWG presented the below diagram, that link S-100 products to e-Navigation Maritime Services. This diagram was created as a way to describe what ENDS is, and also to classify S-100 products and services. This classification is highly related to S-128 product catalogue creation.



## Conclusions

It could be concluded, that initially any S-100 service related to a SOLAS carriage requirement, recognized as a (potential) part of an ENDS service or otherwise related to a recognized Maritime Service would be relevant for S-128. Therefore, a general recommendation would be that a producer of any of the services mentioned in the classification of products related to ENDS, would also be recommended to provide corresponding S-128 data to describe the service. It could also be concluded, that it would be especially important for any producer of a service or product included into S-98 to also provide data descriptions as S-128.

It is further assumed in this paper, based on previous discussions, that SOLAS carriage requirements of nautical chart and nautical publications in the future might be met by using a combination of traditional publications and S-100 / ENDS- services. It is not yet fully defined how this situation is to be regulated, but it is anticipated an obligation of each nation to provide information regarding the S-100 / ENDS services provided and to which extent carriage requirements can be fulfilled by electronic means. In case of a Port State Control, it must be possible to clearly determine the data needed to fulfill carriage requirements.

In this regard, as S-128 could contain both traditional products and electronic services, the nationwide S-128 might need to fill the additional function of indicating the minimum set of products / services needed to fulfill SOLAS carriage requirements, and possibly indicate alternatives.

Initial list of considerations used to support the decision for the need to provide S-128

1. Services included and used in ECDIS interoperability S-98
   1. Any service forming a part of ECDIS interoperability must be included in the relevant S-128 service
2. Services considered a (potential) part of an ENDS- service
   1. Whenever a service, that is recognized to potentially be a part of ENDS, a description as S-128 must be provided. (Even if that particular service might not be provided as an ENDS- service).
3. Any service potentially fulfilling a SOLAS (or similar) carriage requirement
   1. This consideration includes traditional nautical chart and publication products, especially those SOLAS carriage requirements. Additionally, any service that could potentially or partially substitute such traditional publication in order to fulfill a SOLAS carriage (or similar) requirement, should provide a service description as S-128.
4. Any other service case-by-case
   1. The relevancy of providing corresponding S-128 to describe other services must be determined case-by-case.

Special consideration is needed for services that provide S-100 formatted data, optimized for a given vessel, such as S-129 and S-421. The availability of general services such as a route optimization- or Dynamic UKC- service, utilizing these data formats might be described in nautical publications and other products such as S-101 or S-127. However, such ship specific datasets available as S-129 or S-421 products should not be included into the S-128.

As a conclusion, it is considered, that S-128 should only describe products / services which are generally available and common to all vessels. For example; a route optimization service where a vessels route is received and an optimized route returned in S-421 format should not be included in S-128, but merely described as an available service in S-127. On the other hand, if static S-421 datasets of recommended routes are provided, these could be described in S-128.

The need for product description as S-128 is indicated using following recommendations;

* **Mandatory** - The service must be included
* **Recommended** - The service is recommended for inclusion
* **TBD** (To Be Decided) - A decision is not yet needed or available
* **Not suitable** - The product is not suitable for inclusion
* **Not needed** - A recommendation to not include the product in S-128

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| Service | Description as S-128 | Justification / Description |
| S-101 | Mandatory | Part of S-98 1.0.0 |
| S-102 | Mandatory | Part of S-98 1.0.0 |
| S-104 | Mandatory | Part of S-98 1.0.0 |
| S-111 | Mandatory | Part of S-98 1.0.0 |
| S-112 | TBD | New reservation |
| S-122 | Recommended | Part of ENDS, MS 12, Nautical publication data |
| S-123 | Recommended | Part of ENDS, MS 12, Nautical publication data |
| S-124 | Recommended | Part of ENDS, MS5, MSI-data |
| S-125 | Recommended | Part of ENDS, MS 12, Nautical publication data |
| S-127 | Recommended | Part of ENDS, MS 12, Nautical publication data |
| S-128 | Not suitable | S-128 itself is a special case |
| S-129 | Not suitable | Ship-specific service by request only |
| S-130 | TBD | TBD |
| S-131 | Recommended | Part of ENDS, MS 12, Nautical publication data |
| S-164 | NA | ECDIS Test data sets |
| S-201 | Not needed | Service not intended for End User |
| S-210 | Not needed | Service not intended for End User |
| S-211 | Not needed | Service not intended for End User |
| S-212 | Not needed | Service not intended for End User |
| S-230 | Not needed | Service not intended for End User |
| S-240 | Not needed | Service not intended for End User |
| S-245 | Not needed | Service not intended for End User |
| S-246 | Not needed | Service not intended for End User |
| S-247 | Not needed | Service not intended for End User |
| S-401 | Not suitable / TBD | Considered out of scope |
| S-402 | Not suitable / TBD | Considered out of scope |
| S-411 | Recommended | Part of ENDS, MS 13 / 14, Meteo and ice data |
| S-412 | Recommended | Part of ENDS, MS5, MSI- data |
| S-413 | Recommended | Part of ENDS, MS 13 / 14, Meteo and ice data |
| S-414 | Recommended | Part of ENDS, MS 13 / 14, Meteo and ice data |
| S-421 | Not needed / TBD | Mostly ship-specific service by request only |

## Recommendations

This review revealed that the question of which services are to be included in S-128 interlinks to the discussions of classification of services. Therefore the following considerations are recommended when determining whether a (product or) service should be available in the nationwide S-128;

1. *Does the service form a part of ECDIS interoperability as described in S-98?*
2. *Is the service recognized as a potential part of an ENDS- service?*
3. *Can the service be used in order to fulfill SOLAS- carriage (or similar) requirements?*
4. *Is the service intended for the end user?*
5. *Is the (S-100 formatted) data generally available and same for all vessels?*

NIPWG is recommended to ensure that a nationwide S-128 could be used to convey information of the products and services needed to fulfill SOLAS- requirements.

NIPWG is requested to consider whether a separate agenda item is needed, to cover the evolving discussion related to ENDS, product classification and SOLAS carriage requirements.

A separate agenda item covering IMO and SOLAS related requirements to NIPWG S-100 products might better describe the content and current importance of this discussion. A separate agenda item would also provide a better platform for periodical review of this topic.

## Action Required of NIPWG

The NIPWG is invited to:

a. note this paper

b take action as appropriate