

Marine Data Flow

A proposal for Data Supply Chain Certification

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Exxon Valdez

The safety of oil transportation demands review and overhaul. Not just new technology, but new institutions and new attitudes in old institutions are required.



Exxon Valdez Oil Spill Trustee Council

AP Associated Press

(Alaska Oil Spill Commission – Final Report
"SPILL - The wreck of Exxon Valdez")

Exxon Valdez



If Aviation would be as Shipping:
1.5 airliner disasters - every single day, or 550 per year
Loss of 82,500 human lives per year

(Alaska Oil Spill Commission - Final Report - "SPILL - The wreck of Exxon Valdez")

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Technological and human systems aren't perfect: Airliners occasionally do crash. But we have built a system that does not tolerate in air traffic anything like the catastrophic failure rate we can expect in the Valdez tanker trade. Because of that system, air travel can be considered safe and reliable.

Risk cannot be eliminated, but it can be reduced - if we accept the costs involved.

Data Supply Chain Certification

Concepts of certifying the data supply chain

DSCC - Definition

Produce guidance to ensure that:

- Source data integrity is not degraded
- Databases are compatible
- Databases are updated
- Includes all relevant processes and disciplines
- Recommended minimum standard
- Applicable to all phases of the maritime data process

DSCC - Aspects

- Approval of the methods used to process or manipulate data.
- Minimum standard for all phases of the data process applicable to the processing of maritime data, including quality assurance and quality management.

Certification Levels

- Data quality level
- Data security level
- Supplementary Data level

DSCC - Components

1. Accuracy
2. Resolution
3. Assurance Level
4. Traceability
5. Timeliness
6. Completeness
7. Format

DSCC- Advantages

- Provides end user with assurance
- Supports the development of maritime databases.
- Ensures data quality
- Supports the data originator's responsibilities.
- Supports clear liability definition
- Supports open cooperation
- Absorbs inconsistency

In the technology age, precise harmonization of standards is essential.

DSCC - Risks for not having

- Based on the “equal treatment” principle, HOs may not be biased against resellers with questionable quality system.
- HOs may be exposed to increased liability
- Data could be altered inwardly
- Important data may be omitted in final product
- Updates may not be send to all users
- Datasets may be corrupted
- Media may fail to load

Chance of wrong information being displayed !

Marine Data Supply Chain Concepts

High level concepts for data delivery

Conclusion

- WEND principle is not being questioned - rather it is being supplemented.
- Current system has an inherent weakness in that it is based largely on trust.
- Now might be the time to consider adding Data Supply Chain Certification to the well-established standards for electronic navigational data exchange

Thank you!

