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Wasser- und Schifffahrtsverwaltung des Bundes

FEED-BACK

AUDIT E-REPORTING

ERINOT 1.2

May 12, 2009

TELLENGE
TELECOMMUNICATIONS & BUSINESS CONSULTANCY

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Findings based on:	- IVS90 checks - Skipper / Operator info - 24 ‘BTB’ test ships - Chain tests (February 27) - Koblenz tests (March 4/5)

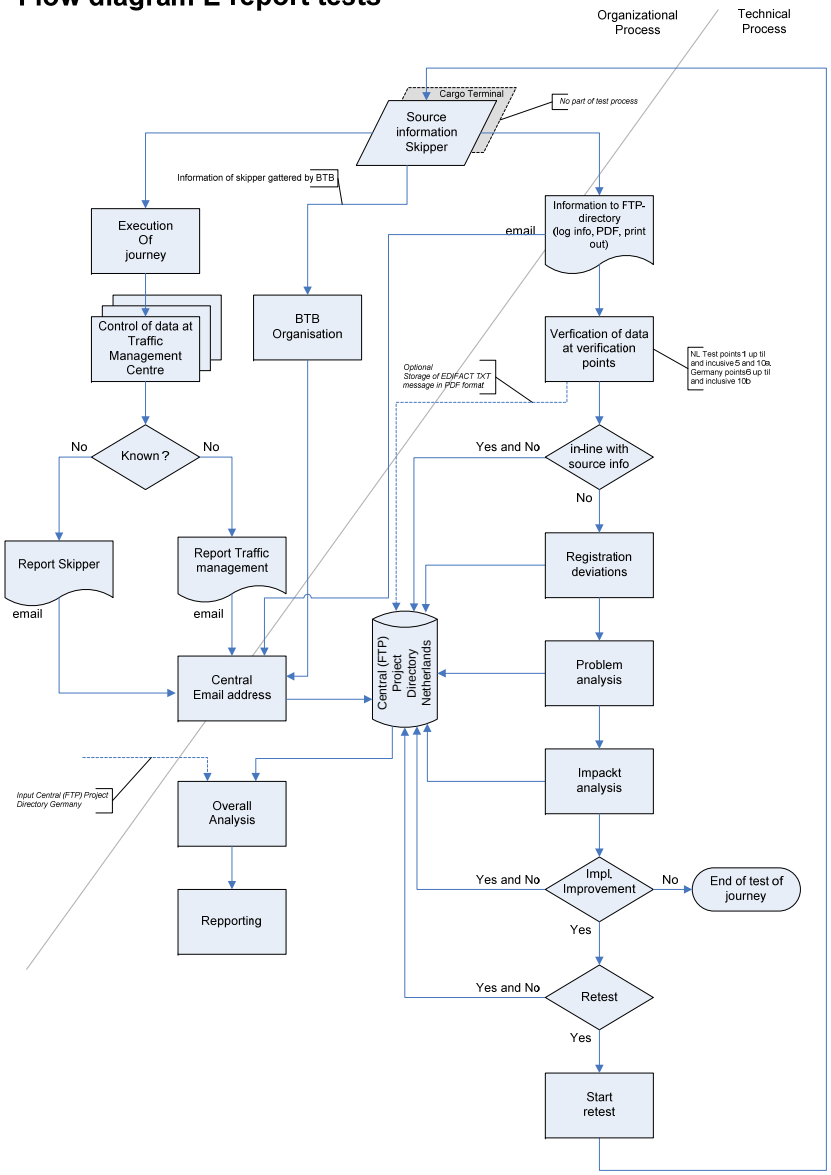
Total of 164 tests (71 unique ships)

General approach (I)

Basic principles of performed tests

- with regard to organisational embedding or familiarity:
  - the shipping that is subject to mandatory reporting must be aware of the technical possibilities/limitations of the Dutch <-> German link ;
  - both Governments must accept the routing of the information exchange between the two systems (IVS90 and MIBII);
  - the operators in the various traffic control stations must be aware of how to request/handle the reports;
- with regard to the message traffic under operational conditions:
  - correctness:
  - completeness;
- with regard to the operational systems:
  - robustness;
  - reliability;
  - timeliness;
  - simultaneity (stress-resistance);

Flow diagram E-report tests



General approach (II)

- single ship without cargo;
- single ship with
  - one type of non-hazardous cargo;
  - one type of hazardous cargo;
  - 4 or more type of non-hazardous and hazardous cargo;
  - one (1) container with hazardous load;
  - one (1) container with non-hazardous load;
  - 4 or more containers with hazardous and non-hazardous load;
  - 4 or more containers with hazardous and non-hazardous load and 4 or more hazardous and non-hazardous bulkloads (not in containers);
- combined hull shipment without cargo;
- combined hull shipment with:
  - hazardous cargo distributed across the ships;
  - non-hazardous cargo distributed across the ships;
  - container with hazardous cargo;
  - container with non-hazardous cargo;
  - 4 or more container (hazardous and non-hazardous) and 4 or more hazardous and non-hazardous bulkloads (not in containers) distributed across the ships;
- a change of a voyage
  - with cargo;
  - without cargo;
- a change of a combined hull shipment voyage;
- cancellation of a:
  - voyage with cargo;
  - voyage without cargo;
  - combined hull shipment voyage;

General approach (III)

The following message data is verified for each voyage:

- Voyage data:
  - ship data (name, no. and dimensions of the sailing unit);
  - origin and destination (down to terminal/berth level);
- Container matrix (container totals, if there are containers on board):
  - total number of empty containers by category;
  - total number of loaded containers by category;
- Cargo details:
  - substance name, id. nos. (UN, HS) and weight of the cargo;
  - loading and unloading points (down to terminal/berth level);
- Container data (if the cargo is in a container)(1):
  - container number and type;
  - stowage location (if indicated);

(1) In the case of a hazardous cargo, the correct name, UN no., class, classification, packaging group. In the case of a non-hazardous cargo, the correct name and HS code.

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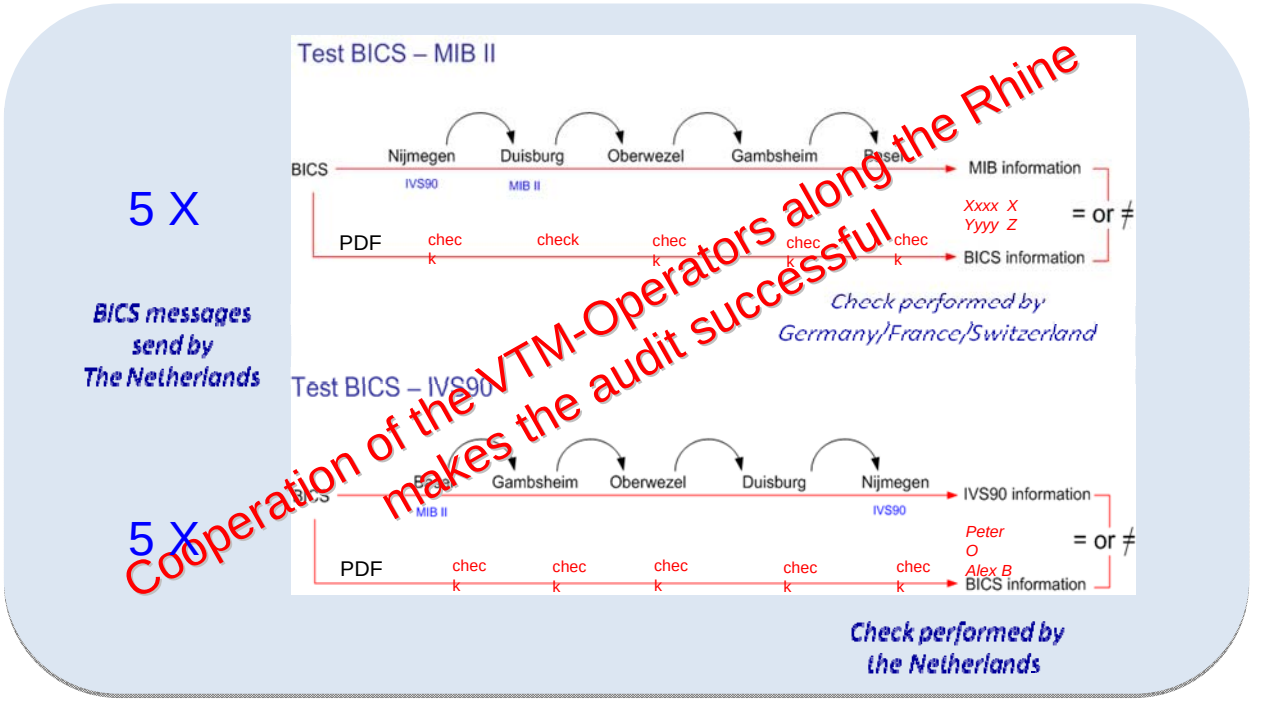
‘Live‘ tests with BTB’ test ships

Participants 'CHAIN' TESTS			
#	OFS-number	Name of ship	Company
1	2104104	ALPI	BOUMAN Z
2	2323626	AMIGOS	KLEI HOLLANDER VOF VAN DER
3	2329306	AZOLLA	VOF STORM SCHEEPVAART
4	2326661	CARONIA	VINCENT HEUVELMAN
5	2324146	CASA-NOVA	VINCENT HEUVELMAN
6	2326056	COMMANDER	COMMANDER VOF
7	2330686	FACTOFOUR	SHIPPING FACTORY
8	2326484	FENNY 1	VINCENT HEUVELMAN
9	2324793	FIXUT MARIS	FIXUT MARIS VOF SCHEEPVAARTBEDRIJF
10	*2327356*	FORENS	*FORENS VOF*
11	*2325641*	INITIA	*INITIA VOF SCHEEPVAARTBEDRIJF*
12	2329407	JURA	SCHEEPVAARTBEDRIJF VOF JURA
13	2329377	KILIYA	PT BINNENVAART B.V.
14	*2321732*	LEYLA	*SCHEEPVAARTBEDRIJF LEYLA VOF*
15	2325828	MARAJO	MARAJO BV
16	2325825	MEJANA	MEJANA BV
17	2328681	NORMA	DANCHA RIVERLINE
18	2321654	REMBRANDTTOREN	REMBRANDTTOREN SHIPPING BV
19	2325947	SALUTE	SALUTE VOF
20	2319631	VEERHAVEN 7	THYSSENKRUPP VEERHAVEN BV
21	2323833	VEERHAVEN IX	THYSSENKRUPP VEERHAVEN BV
22	2329273	VEERHAVEN X	THYSSENKRUPP VEERHAVEN BV
23	2316506	VEERHAVEN V	THYSSENKRUPP VEERHAVEN BV
24	2322865	VEERHAVEN VIII	THYSSENKRUPP VEERHAVEN BV

Cooperation of the skippers makes the audit successful

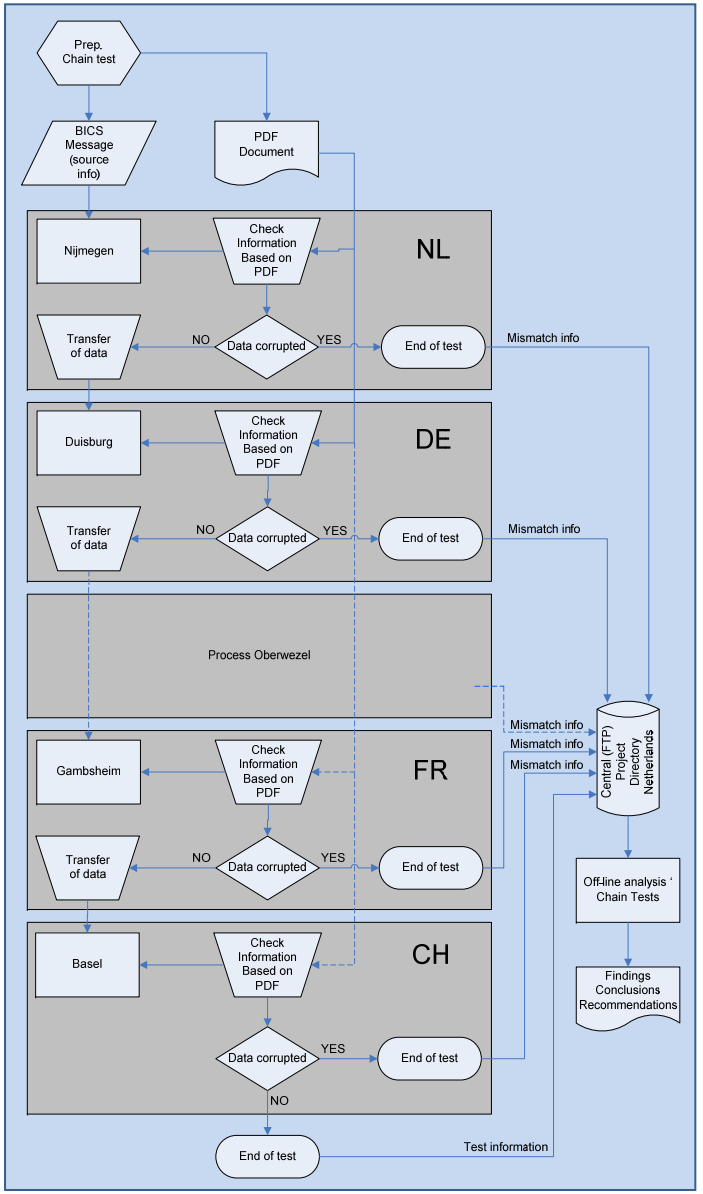
Process: virtual ‘chain’ tests



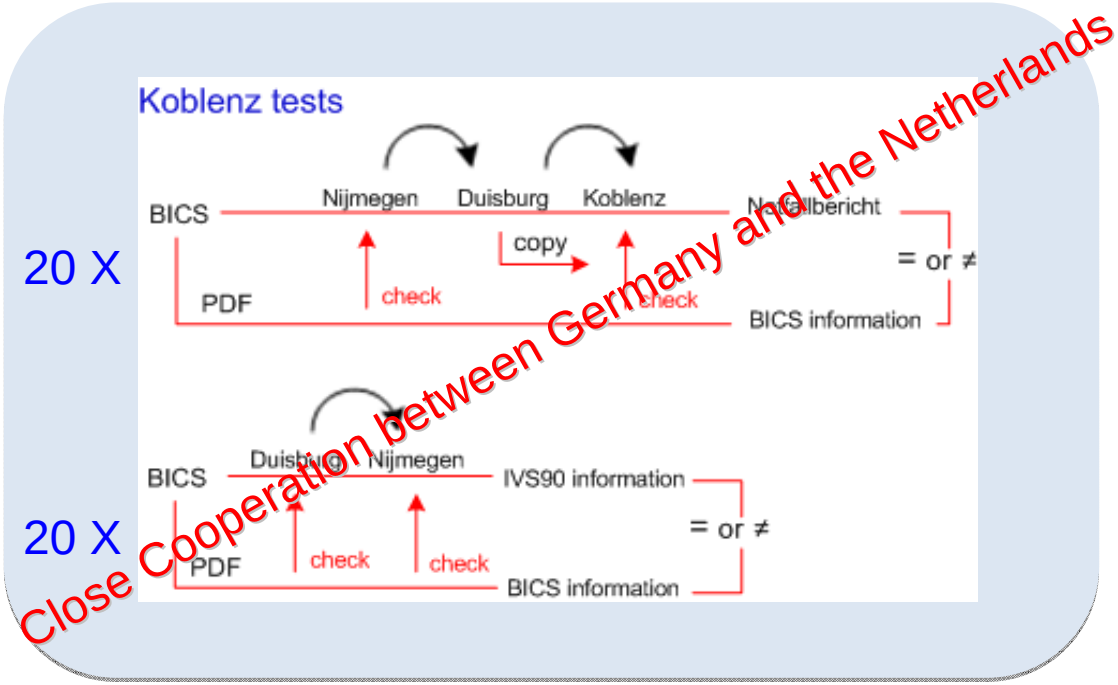
Chain tests

The following process was followed:

- pre-divined BICS-messages are prepaired and generated (both directions) in NL;
- information received by the different VTM's was checked based on received PDF information out NL;
- in case the 'Notfallbericht' was sufficient, 'on-screen' information was used during the verification.
- all information used during the verification was collected and stored (electronically);
- if no corrupted data was found the electronic message was sent to the 'adjacent' VTM;
- if corrupted data was found an off-line analysis was performed and no data was sent to the 'adjacent' VTM;

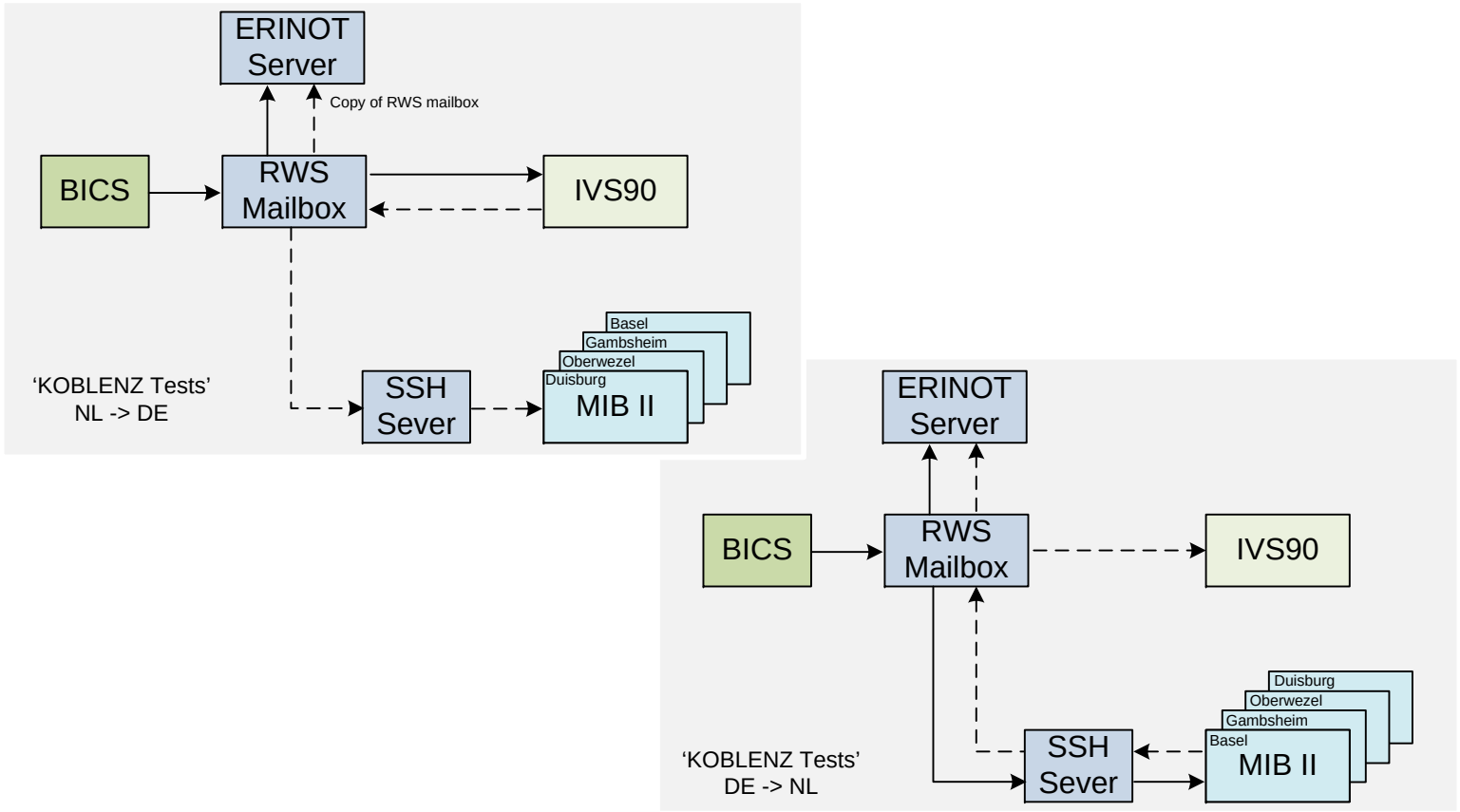


Process: Koblenz tests



Due to the willing cooperation of Switzerland it was possible to make use of 25 (not used) 'Amtlichen Schiffsnummern'

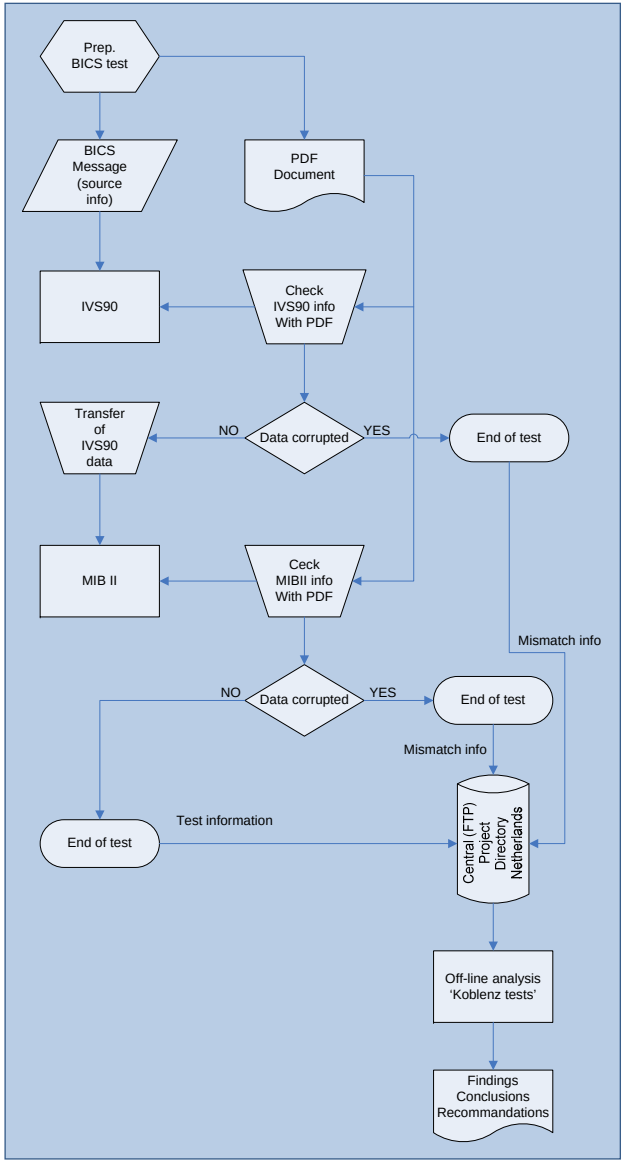
Message flow Koblenz tests



Koblenz tests

The following process was followed:

- pre-divined BICS-messages are generated in NL;
- received messages by IVS90/MIB II are checked;
- in case the ‘Notfallbericht’ was not sufficient, ‘on-screen’ information was used during verification;
- all information used during the verification was collected and stored (electronically);
- if no corrupted data was found the electronic message was sent to the ‘adjacent’ system (IVS90 to MIB II / MIB II to IVS90);
- if corrupted data was found off-line analysis was carried out and no data was sent to the ‘adjacent’ system;
- all information needed to perform an off-line analysis was collected (electronically);



Conclusions

General

- 85% of the findings are of importance related to RPR 12.01 implementation;
- 70% of the findings are technical related (IVS, MIB, BICS, CP, ERINOT Server, etc.);
- rest 30% of the findings need a procedural ‘approach’;
- results of the audit are split in Priority 1 and 2 findings
- meaningless e-reporting messages (cargo, container nr., stowage location ‘unknown’ and errors);
- until now transferred e-reporting content is not ‘transparent’ (loss of data) between syster (MIB <-> IVS90);

Technical

- some of the Prio 1 items
  - same dangerous goods, different shipments in 1 container or barge will result in wrong total weight (safety issue);
  - (re)linking of barges in transport combination to the last one announced in case same numbers are used (typo skipper for example). Related to dangerous goods it will be a safety issue;

Procedural

- Communication has to be structured and harmonized:
  - VTM <-> VTM operator;
  - VTM operator <-> Ship/Skipper;
  - Technical/procedural -> skippers;

Recommendations (I)

- define ERINOT-Server as ‘Notary function’ for RPR 12.01;
- implement a transparent data exchange of e-report data given by skipper (skipper is after all
  responsible of the content). Think about “optional” fields like:
  - container stowage location
  - terminal codes;
  - voyage number;
  - CAR message;
  - inner packages (not yet used by inland shipping);
  - other optional fields;
- harmonize European wide the use of Terminal codes;
- decrease data exchange delay (30 min) between MIB sub systems;
- reduce by active policy the number of ‘meaningless’ e-reporting messages;
- to be prepared to an increase of the number of e-reporting messages, perform (for both
  systems) a so called ‘system load’ test (stress test)
- in case of a ‘syntax’ error in an ERINOT message store it and send a ‘RSP-message’ back to
  the skipper (in-line with the ‘notary function of the ERINOT-server);
- harmonize the policy towards the use of VES and CAR e-reporting messages European wide;
- automate the transfer of voyages of MIB <-> IVS90 (‘slip one’s mind’ can’t be happen);
- to get meaningful e-reporting information ‘press’ skippers by use of the used applications

Recommendations (II)

Way ahead

- solve defined findings:
  - **Prio 1** as quick as possible (before mid of May, 2009);
  - **Prio 2** before end 2009;
- solved Prio 1 findings have to be retested before RPR 12.01 will be implemented;
- check implementation of **Procedures** before RPR 12.01 will be implemented;
- solved Prio 2 findings have to be retested before end of 2009;
- activate implementation of RPR 12.01 ***not*** before:
  - priority 1 findings are solved;
  - end of September 2009 (priority 1 findings have to be solved and tested);
- keep time between mid of May and end of September as a reserve for testing and re-testing;

Considerations

- extend the ‘coverage region’ of the ‘ERINOT-Server’ functionality European wide;
- define ‘system’ availability (MTBO) and fix it in a SLA – Maintain the SL !!;
- exchange all e-messages. (target group and non target group) (IVS90<->MIB);
- monitor (after implementation) RPR 12.01 e-reporting continue;
- as a final check execute 6 months after implementation of RPR 12.01 a ‘system’
  (IVS90/MIB) Audit;
- accept and process/carry through the findings of the Audit (legal, technical and procedural aspects);
- mention/display stowage location of containers (if reported) in ‘Notfall’ report;
- in case of passenger vessels; get done; crew members and passengers will be reported separately (in-line with aviation rules);
- perform on regular basis structural not least

Last but not least

- ‘Central VTM-monitoring System Architecture’ has to be considered/is needed based
  on cooperation between DE and NL (more cooperation beforehand is needed)

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