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**EUROPEAN COMMISSION
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Topic (i): Web technology in statistical information systems

THE ALTINN PORTAL
A COMMON PORTAL FOR REPORTING DATA FROM PRIVATE INDUSTRY TO GOVERNMENTAL INSTITUTIONS

Contributed Paper

Submitted by Statistics Norway[1]

Summary

1.   Over the last two years a common portal named ALTINN, has been created for reporting data from private industry to governmental institutions.

2.   Statistics Norway, The Tax Administration (The Directorate of Taxes)**,** and The Brønnøysund Register Centre have been the driving forces in the development of this portal. This solution provides a new way of reporting data electronically from any juridical entity; business, private persons and public organizations. The aim is to reduce the burden of reporting by a better coordination of the needs of data for different governmental institutions, to have an easier way of reporting the data, and to improve the quality of the data at lower cost.

3.   The solution is designed to be flexible and scaleable to be able to:
- add institutions;
- add questionnaires (set of forms, subforms and attachments);
- add data providers;
- guarantee response rates and availability of the system;
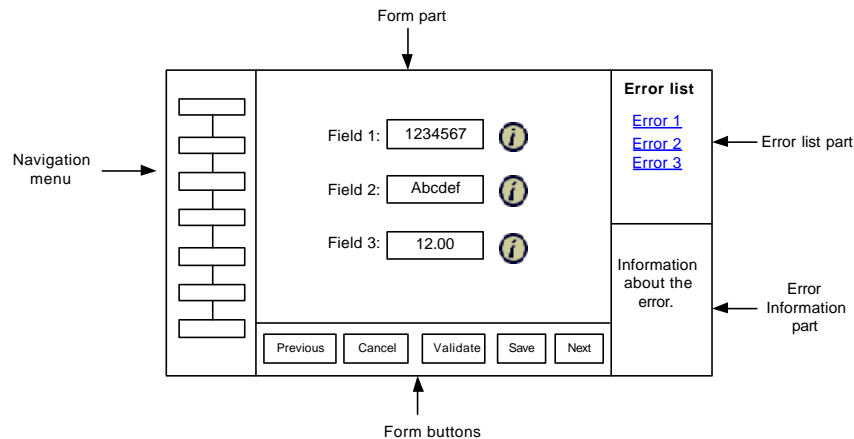- add functionality.

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The Metadata

4.   Governmental institutions must register all questionnaires and their metadata to The Brønnøysund Register Centre (eg. National Repository on data elements), which is a governmental body under the Norwegian Ministry of Trade and Industry. This centre also consists of several different national EDP registers.

The Forms

5.   The metadata are used to create the web forms automatically, and businesses will find all their questionnaires and reporting periods listed in the ALTINN portal. The web forms will have a common layout:

6.   The form will be in the middle of the screen and the entire form will be visible without scrolling (with some exceptions) at a screen resolution as low as 800x600. In other words, the form will fit in the area, which is left after the navigation menu, and the information part is placed on the screen. The information icons on the form will always be visible.

7.   Navigation, storing, cancelling and validating a form is done with the buttons at the bottom of the page. When the user clicks the validation button, the validation process will start and the validation page will be shown to the user. If there are errors on the form, the user will be presented with an error list of all the errors. If there are no errors, the validation page will only inform the user that the form is validated and no errors were found. From the validation page the user can navigate back to the form or he can go to the "Next step" page. The paper contains a more detailed description of the form approval process.

Data from Enterprise Systems

8.   Data from enterprise systems may also be sent directly to the portal using a specified XML-format. The portal directs the data from its archive to the different governmental institutions, based on sender/receiver information in the XML. The enterprise systems can send multiple forms in a shipment.

The Archive System of the Portal

9.   All data sent through ALTINN must be stored in a way making it legally possible to use the data as proof of what the sender has sent. This means that the stored data cannot be changed or deleted, and that all necessary approval information, envelope information and data for tracking a transaction must be stored in the Archive.

10.   There are multiple users that store data in the archive and they have to use the archive service to execute storage. The process of storing data and attachments is transactional, which means that everything is

stored correctly or if something goes wrong nothing will be saved. With the transaction the archive service ensures that the data integrity is not compromised. The transaction makes sure of this.

11.   The archive stores all the submitted forms and attachments, and information about the identity of the sender. It should not be possible to modify the data in the archive after storing. This is solved by approving the stored data with an ALTINN digital approval based on the data and timestamp for storing, and copying the archived data to optical storage.

12.   The form data is stored as XML (XFD), with a reference to the form definition file (XFT file) used for the specific form instance. The form definition files are version controlled and not stored directly in the archive. The form data with the reference to the form definition file is stored in a table in the archive database. In addition to the form data, available envelope information from the shipment (such as timestamp, sender ID, sender address, digital approval data etc) will be stored in the database. Attachments will be stored in a separate table, with a foreign key to the form data they belong to.

Data from the archive to the governmental institutions

13.   Data may be sent continuously to the governmental institutions, or at agreed given timestamps as batches of data. The data may be sent in different ways (different protocols), depending on what is the preferred way for the institutions. Statistics Norway receives their data over the Internet using https. The receiving and sending system installed at Statistics Norway is XML Mediator (Software AG).

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