

Earth observation product distribution using standard interfaces

Juha-Petri Kärnä⁽¹⁾, Matias Takala⁽²⁾, Mwaba Kangwa⁽²⁾

⁽¹⁾*Finnish Environment Institute SYKE*

⁽²⁾*Finnish Meteorological Institute*

Finnish Environment Institute SYKE

Mechelininkatu 34 a, P.O. Box 140, FIN-00251 Helsinki, Finland

A vast amount of different kinds of remote sensing products are nowadays available on the web. For example SYKE has been publishing snow maps derived from remote sensing data through its www pages for several years (<http://www.ymparisto.fi/snowcover>). That is a simple and user friendly method to make the products available to anyone. This method is widely used around the world, but it has some drawbacks, however, from the users's point of view. One challenge is to find the available products. The other difficulty arises if someone wants to fetch the products automatically to process the data further. The producer faces the problem to suit the needs of the different users to provide products in many different file formats and distribution methods (WWW, FTP, shared disks, etc.). Fig. 1 illustrates the real world situation.

To address the changes pointed out above, the Open Geospatial Consortium (OGC) has developed standards, of which three of them are useful in snow product distribution: Web Map Service (WMS), Web Coverage Service (WCS), and Catalog Service for the Web (CSW). The first, WMS, defines a HTTP interface for requesting geo-registered map images, the second, WCS, a standard interface and operations that enables interoperable access to geospatial grid coverages, and the last, CSW, an interface to discover, query, and browse metadata.

SYKE and FMI are currently working on to publish its products through WMS interface using the following software: ArcGIS Server at SYKE and ERDAS Apollo at FMI. The catalog service will be implemented using Esri Geoportal Server and ERDAS Apollo. Snow products, SWE and SCA maps, were chosen to be the first products to be put online, but other products, like water quality products, will follow. The target situation is presented in Fig. 1.

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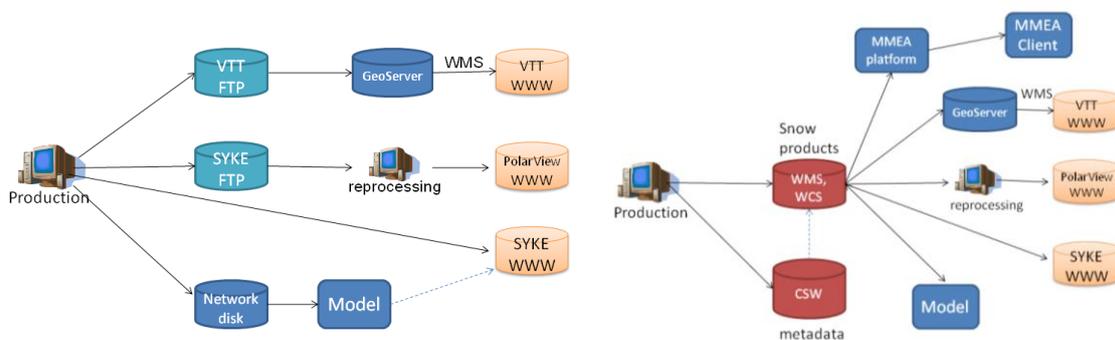


Figure 1. The snow product distribution at SYKE currently (left) and in the future (right).