The Arctic Permafrost Geospatial Centre

A new central platform for hosting and distributing geospatial permafrost datasets

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Introduction

The Arctic Permafrost Geospatial Centre (APGC) is currently being designed as a web interface showcasing high level projects producing geospatial datasets with permafrost focus and will provide an entry point for their geospatial product dissemination needs.

At the core of the APGC we are establishing two services for data discovery: an Open Access Data Catalog and an Open Access WebGIS Application.

Component 1: The Data Catalog

The APGC Data Catalog will allow searching for project-specific geospatial data by tags, keywords, data type and format, licence type, or geographically, provides a data preview figure, localizes the dataset on a zoom- and pan-capable basemap, displays a variety of metadata, and links to a permanent DOI-based archival link at the PANGAEA data repository. The APGC Data Catalog will be based on the open source CKAN data catalogue architecture, allowing geospatial data categorization associated with defined projects based on metadata standards. The Data Catalog will contain all final products of projects that will be featured here, for example the ERC PETA-CARB project and the IPA Action Group on Yedoma ice-rich permafrost.

Component 2: The WebGIS Application

The WebGIS Application will rely on OGC-standardized Web Mapping Services (WMS) and Web Feature Service (WFS) technologies for data display and visualization. The WMS/WFS services are provided through the Data Catalog. We are further evaluating the possibility to load external WMS/WFS services in the WebGIS Application. Legends will provide information on data attributes, and pop-up menus will provide information on metadata and a link to the archive location for a dataset. The WebGIS Application will provide an independent and visually interactive platform for displaying both raster and vector geospatial data from the project.

Figure 1: Basic scheme of handling spatial data in APGC

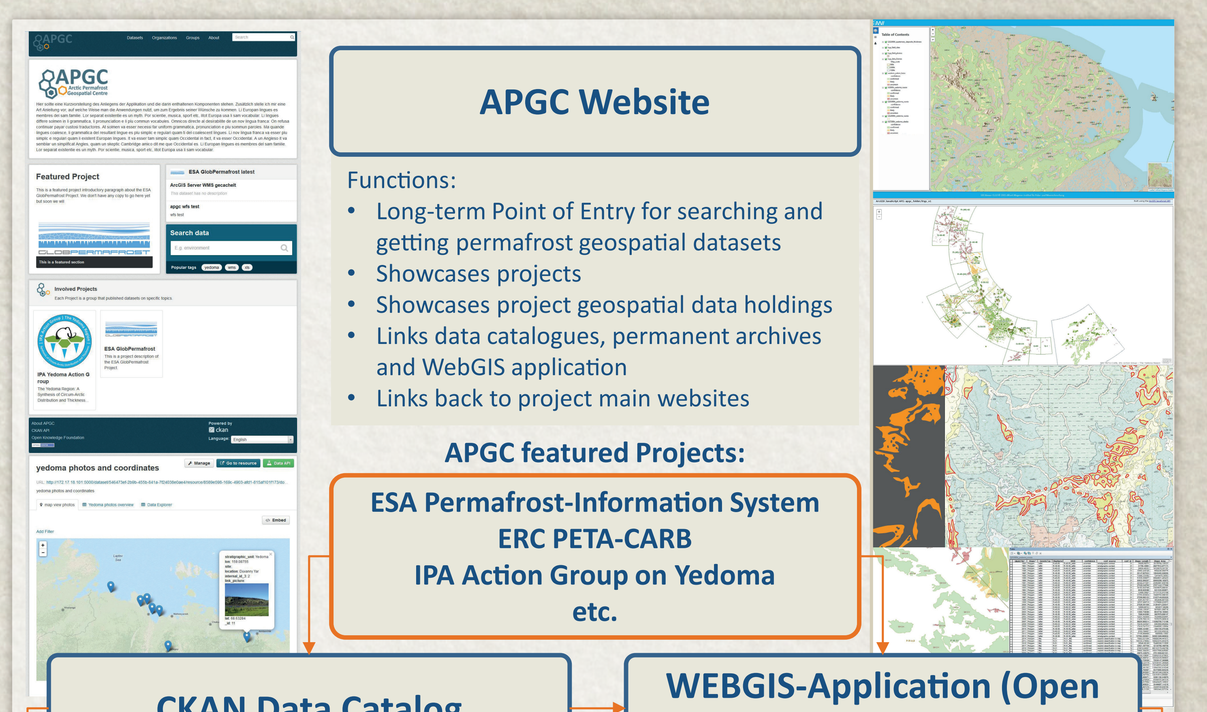

Figure 2: Components and functions of the APGC

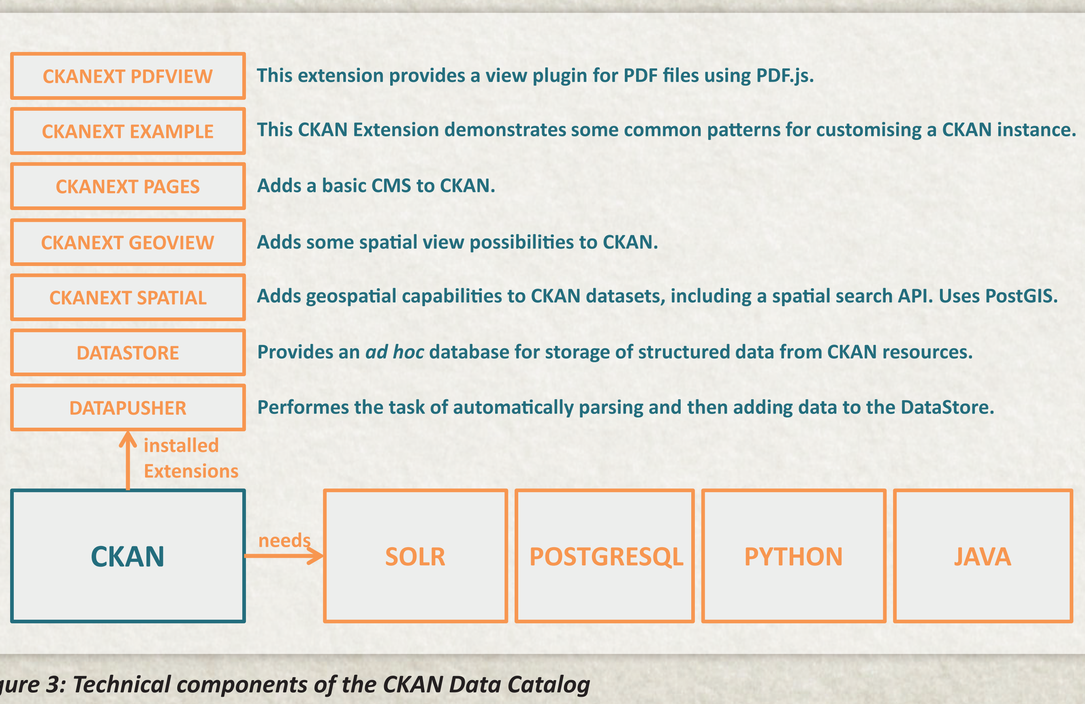

Figure 3: Technical components of the CKAN Data Catalog

Key Features

- **Long-term support for all components like Data Catalog, WebGIS or PANGAEA hosted by AWI-infrastructure**
- **Central Point of Entry for searching geospatial permafrost data**
- **WebGIS-visualization of data and attributes due to Open WMS/WFS Services**
- **TATTоо – a Trend Analysis and Time series Tool for spatial raster data**
- **Direct download-link to PANGAEA database**

Save the Date:
The release of the APGC-application will be on the 1. October 2016

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