

OGC Standards and their role for ACIS - Chances and Challenges

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Google Earth – A tool for ACIS-Users?

- **User-Perspective**

- Very user-friendly and intuitiv Interface
- Detailed geospatial data: high-resolution aerial photography
- Adding your own placemarks
- Free of charge (?)
- Chances with „[...] Google Earth, arguably the greatest thing to hit the Internet since porn.“ (Brandchannel 2006)?

=> high **information** content!

About

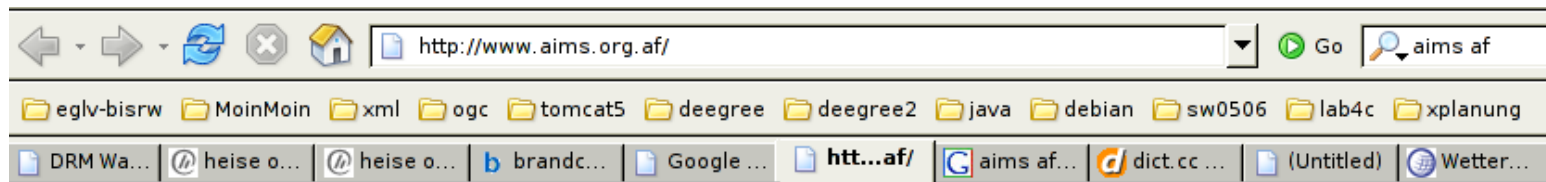
- Spin-Off of University of Bonn (11/2000), 2004: GmbH
- SDI/OGC/ISO-Competence+ Free Software
- Consulting, Software-/Solution development, Training
- deegree – so far, largest Implementation of OGC/ISO-Standards
- GDI NRW, HUIS/UmweltInfo.online Hamburg, Gazetteer Brandenburg, OGC CITE, Geodatenportal Wuppertal, SDI Consulting GDI-Berlin, Metainfo Luxembourg
- Active OGC Member

Agenda

- Current geospatial Situation in Afghanistan
- Requirements & Challenges for ACIS
- OGC based solutions:
 - geospatial data providing
 - geo-enabled access control
- Consequences

Afghanistan: „Spatial“ Situation

- **(More) Operator's View:**
 - Afghanistan Information Management Service (AIMS)



Active Server Pages error 'ASP 0113'

Script timed out

/index.asp

The maximum amount of time for a script to execute was exceeded. You can change this limit by specifying a new value for the property Server.ScriptTimeout or by changing the value in the IIS administration tools.

Afghanistan: „Spatial“ Situation II

The screenshot shows the AIMS website interface. At the top, there is a navigation menu with links: Home, About AIMS, Services, Maps, Afghanistan, and Contact Us. Below the menu is a search bar. The main content area is titled 'Afghanistan Shape Files' and lists several data files:

- [Rivers - \(Line\)](#) [3.84MB-ArcView Zip] (01 August 2005)
- [Roads - \(Line\)](#) [3.34MB-ArcView Zip] (01 August 2005)
- [Airport Airfeilds - \(Point\)](#) [9.48KB-ArcView Zip] (01 August 2005)
- [Health Facilities - \(Point\)](#) [61.3KB-ArcView Zip] (01 August 2005)
- [International Airports - \(Point\)](#) [7.24KB-ArcView Zip] (01 August 2005)
- [Settlements - \(Point\)](#) [1.45MB-ArcView Zip] (01 August 2005)
- [Cultivated Areas - \(Polygon\)](#) [3.47MB-ArcView Zip] (01 August 2005)

On the right side of the page, there is a sidebar titled 'Kabul City Shape Files' with links to 'Int. Org. Diplomatic Mission & UN (Point)', 'Roads - (Line)', and 'Road Intersections - (Point)'.

- filebased geospatial-**data**:
 - Where is my map? Where is my information?

Geospatial Development Status Af



Chances and Challenges?

- **User's Perspective:** How do you provide spatial **information** instead of **data** in current IT-situation in Afghanistan?
- **Operator's Perspective:**
 - How do you guarantee that ACIS can be operated by locals in their IT-environment **sustainably**?
 - How do you protect information against unintended access?

Using Geospatial Standards



- Open standards of the **Open Geospatial Consortium (OGC)**, an international non-profit Standardisation Organization caring for standards for geospatial information
- open and free-of-charge
- developed out of and proven in practice
- www.opengeospatial.org

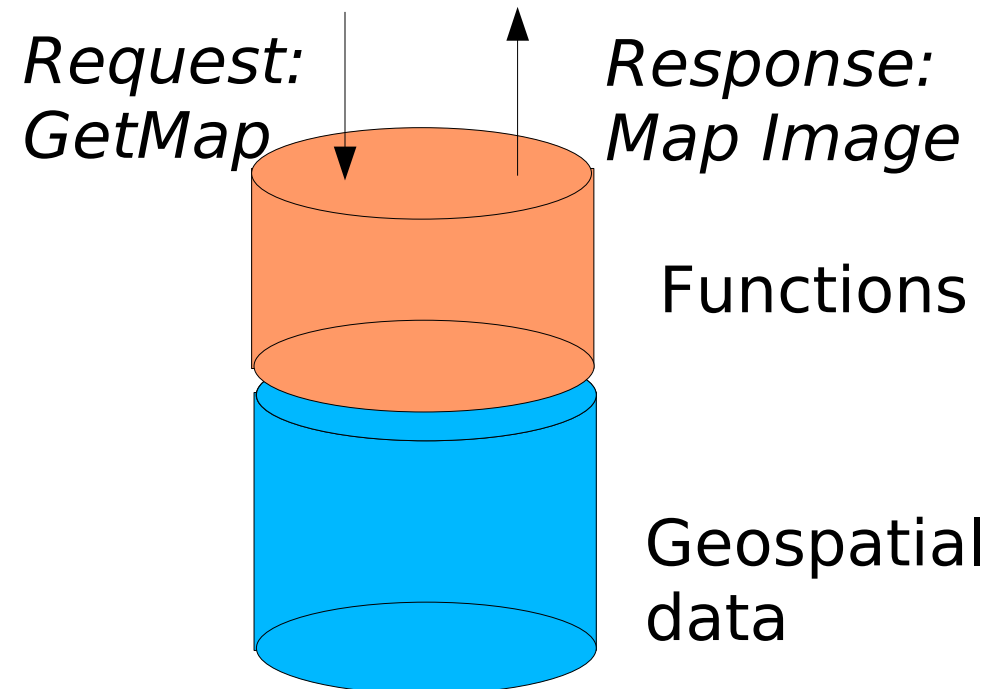
OGC - why?

- => high protection of your investment



OGC HowTo

- Interface Specifications (same language), Service-orientated
- Enclosure of geospatial data and functions (c.f. GetMap)



OGC Web Map Service in use for Afghanistan

(Result of Student-Seminar at i5)

-- ACIS based example --

<http://ulme.informatik.rwth-aachen.de:8090/igeoportal>
(Please use MS IE 6 or newer or Firefox 1.5 or newer –
March 2006, out of service))

Chances – Users

- User's perspective:
 - Getting maps on demand easily
 - Combining map layers
 - Combining map layers from different sources provided by the „Web Mapping Revolution“

=> **Interoperability**

Ability of machines to interact on basis of common protocols, here OGC WMS

- **everybody has access!**

Chances - Operators

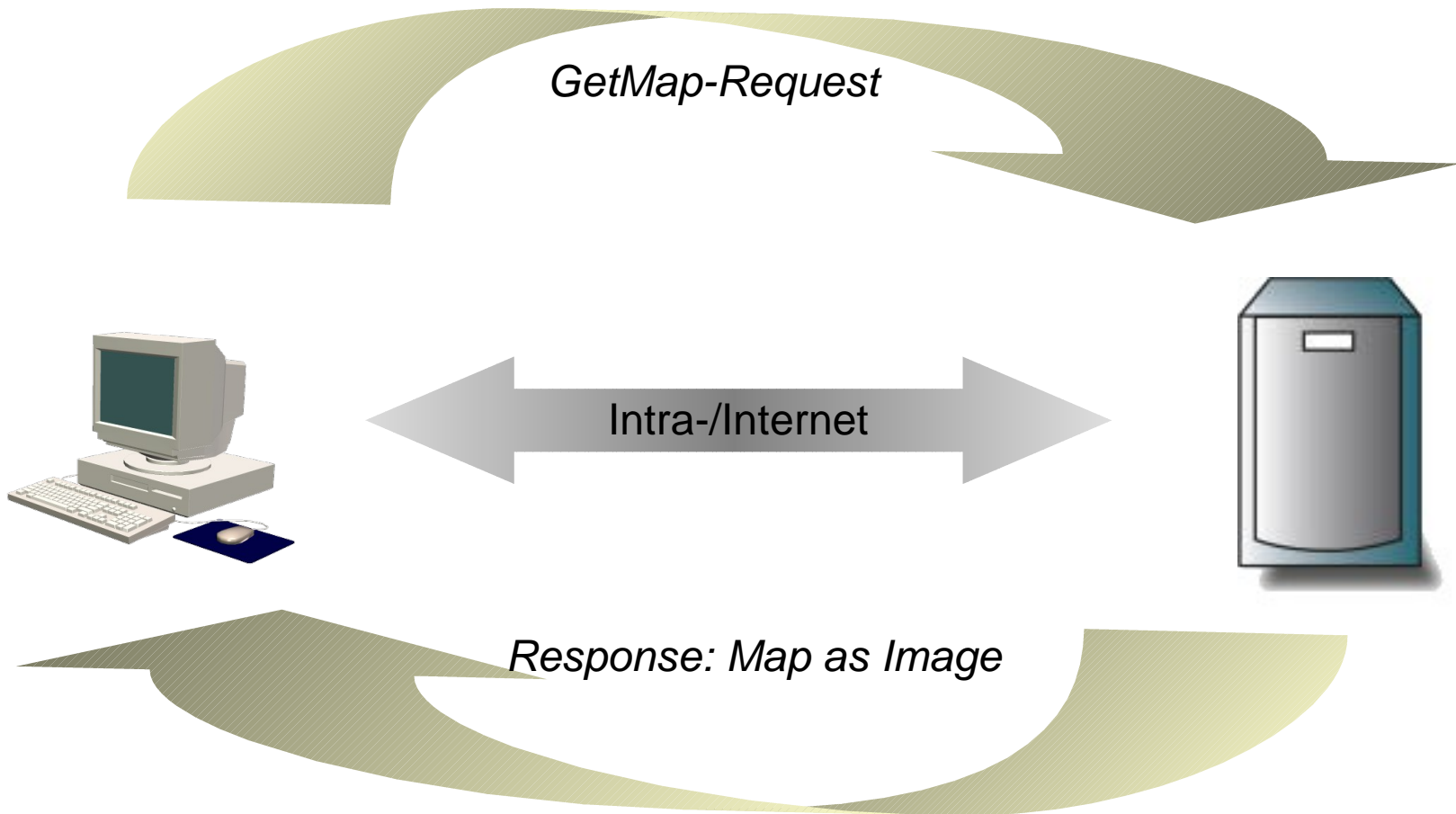
- Tuning a system made out of „**small**“ **building blocks** for geospatial information (service-oriented)
- Participating of other geospatial data providers through **interoperability**
- **Long-term protection** of high investments in data acquisition
- Good Guarantee that **value-added chains** come up in order to provide a basis for planing, controlling, etc. in Afghanistan

Challenges for ACIS

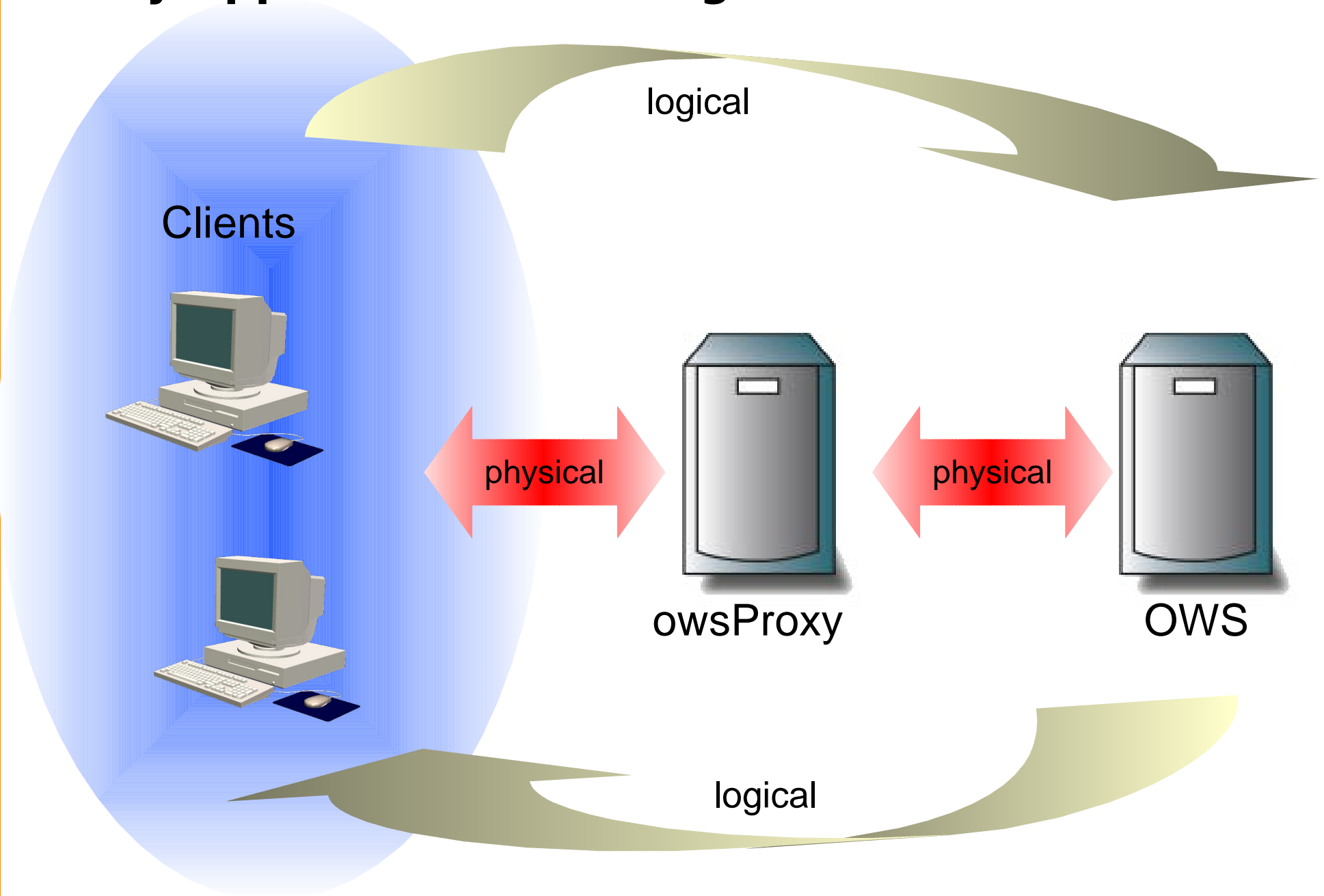
- Everybody has access – that's intended!

Restricting access to specific cultural heritage sites in the information system **without** limiting interoperability?

Client/Server Communicat. (WMS)



Proxy Approach: Controlling the traffic



owsProxy – „A geographic doorman“

- Providing authentication (Identification) and authorisation (Permisson) based **on common IT-standards**
- Providing **spatial rights**: Anonymous users are just allowed to see sites exterior a buffer of 5 km of buddha statues in Bamian Valley

owsProxy in use
image being in Afghanistan

-- deegree based example --
(local demo)

GeoDRM @ OGC

- Geo Digital Rights Management since 2004 at OGC
- Using common IT-standards where possible: https, SAML, XACML, MPEG 21-REL, ...
- Design principle: Embedding without touching – add GeoDRM-Mechanism without change e.g. OGC WMS Standard
- Proof of concepts in OGC WebService Initiatives
- GDI-NRW providing a discussion paper for first GEO-DRM standards to OGC

Consequences for ACIS

- Providing geospatial information for everybody to support planning and controlling processes in a growing democracy
- Long-term protection for information (real assets) through open standards
- system of „small“ building blocks – keep complexity low
- Controlling access to ACIS via geo-enabled proxy („geographic doorman“)

Using Google Earth now?

- Does not support any open standard!
- Solution of one company (Monopoly)
- Leaving Beta Status: Presenting ACIS in an environment of advertisements
- broadband application with high system requirements

=> Is Google really not evil?!

=> Challenges for a developing country!

NASA WorldWind (local demo)

- More for having a look ... -
<http://worldwind.arc.nasa.gov/>
- Adding your own WMS services –
http://www.worldwindcentral.com/wiki/WMS_Sources
- Hint: With the ACIS WMS of the seminar at
<http://ulme.informatik.rwth-aachen.de:8090/deegreewms/wms>
are some unfixed problems in the moment

Google as new OGC-Member

GEOnews

25.01.2006

Google ist neues Mitglied im Open Geospatial Consortium (OGC)



Google ist als Principal Member dem Open Geospatial Consortium (OGC) beigetreten und wird vermutlich seinen Einfluss geltend machen um den Normierungsprozess in der Geoinformatik voranzubringen. Mit dem Beitritt zum OGC könnte Google nun zukünftige Entwicklungen standardisiert implementieren.

Insbesondere könnte auch GeoRSS zum Standardnotations-Format werden, um Weblogs, News und Multimedia zu verorten. Weiterhin könnte Google z. B. auch daran mitarbeiten, um die Differenzen zwischen KML und GML auszugleichen.

Die kostenlosen Dienste von Google Earth und Google Maps erfreuen sich inzwischen großer Beliebtheit und immer mehr Unternehmen entwickeln in letzter Zeit zusätzliche Schnittstellen und Dienste zu den Google Kartendiensten. Beispiele dafür sind die GDI-Schnittstelle der con terra GmbH oder die kürzliche Anbindung der NWSIB-online an Google Earth durch die GIS Consult GmbH.

Weitere Informationen unter:

<http://www.opengeospatial.org/resources>

<http://www.earth.google.com>

http://www.geobranchen.de/index.php?&option=com_geonews&page=details&id=1997

Bunch of Success for ACIS!
All the Best!

Thanks for your attention!

Questions, Discussion

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