

Using a GIS S&T Body of Knowledge within a developed Curriculum design tool



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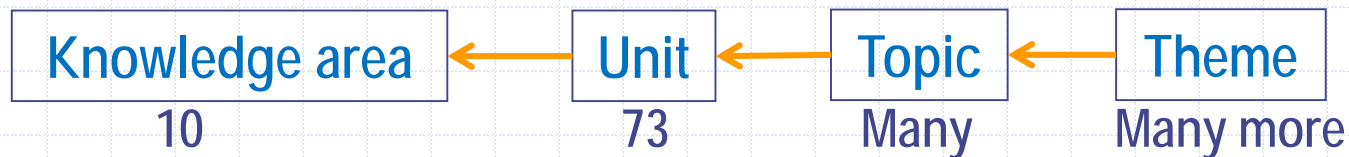
Overview

- GIS&T Body of Knowledge
- Project GIN2K
- Curriculum design tool

GI S&T Body of Knowledge

- BoK in general is basically the agreed ontology of a specific professional domain (reference framework).
- For GI S&T It is a collection of textual listing for GI S&T domain introduced in 2006 by the American Association of Geographers.

Structure



Purpose:

- to "bridge the gap between the GI S&T higher education community and the practitioners, employers, and clients who populate the various GI S&T professions" (DiBiase et al. 2006)

Project GI-N2K

GIN2K: „Geographic Information – Need to Know“
(<http://www.gi-n2k.eu/>), 10/2013 – 09/2016

Funded by EU (Erasmus Lifelong Learning Program)

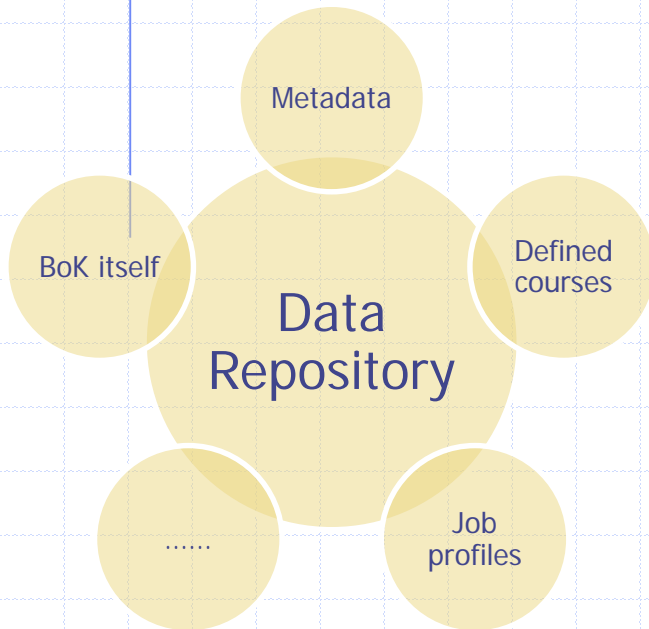
31 partners from 25 countries

AGIS: Co-Lead of WP (with ISEGI/UNL), development of Curr.
Design tool (with UJI)

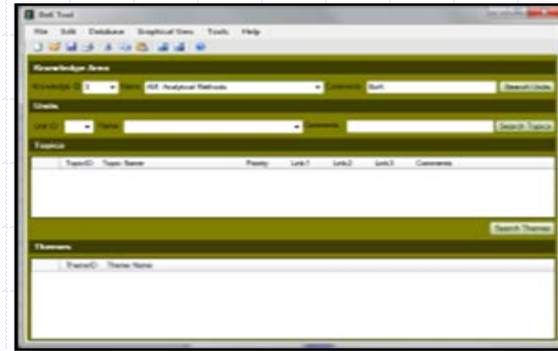
- Analysis of requirements to a BoK from different areas (education institutions, public services, companies)
- Concept and implementation of tools to ease the usage of a BoK
- Transfer of the content of the BoK to an advanced Wiki (cooperation with Sean Ahearn and Andre Skupin)
- Revision of the content of the BoK
- Tools: focus on Curriculum design tool

The Virtual Lab for the BoK: VirLaBok

Overview:



Comp1: Data repository (from Ahearn / Skupin), Also Services



Comp2: Dynamic platform

- To define and update knowledge areas, units and topics, access through services

- Wiki allowing discussion between GI S&T experts and users of the BoK

Software Tools

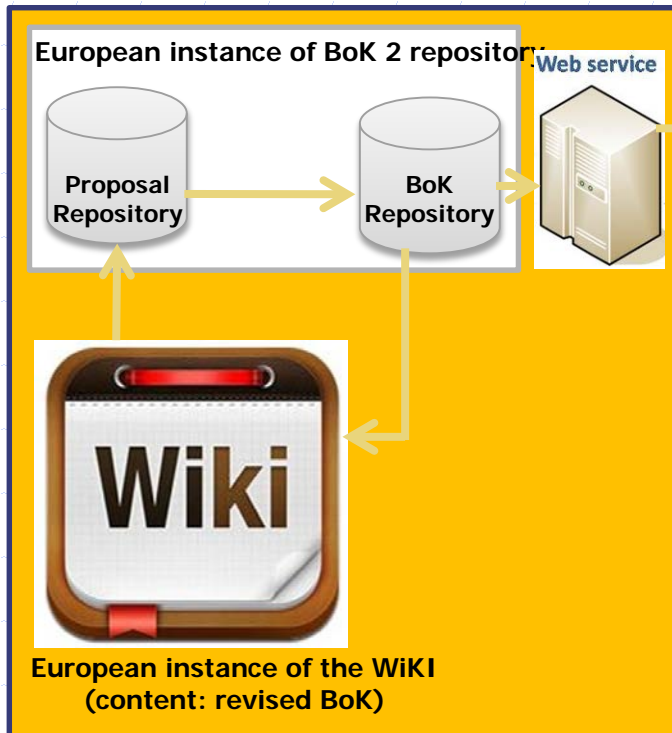


Comp3: Tool sets

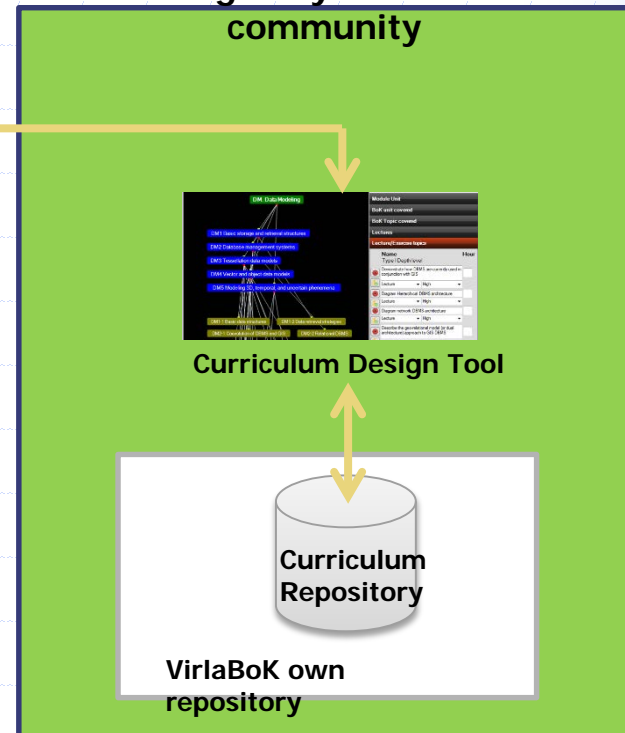
- To define courses
- To define learning paths
- To define job profiles
-

General architecture of the VirLaBoK

Managed by US BoK2 community



Managed by EU GIN-2K community



Some Terminologies

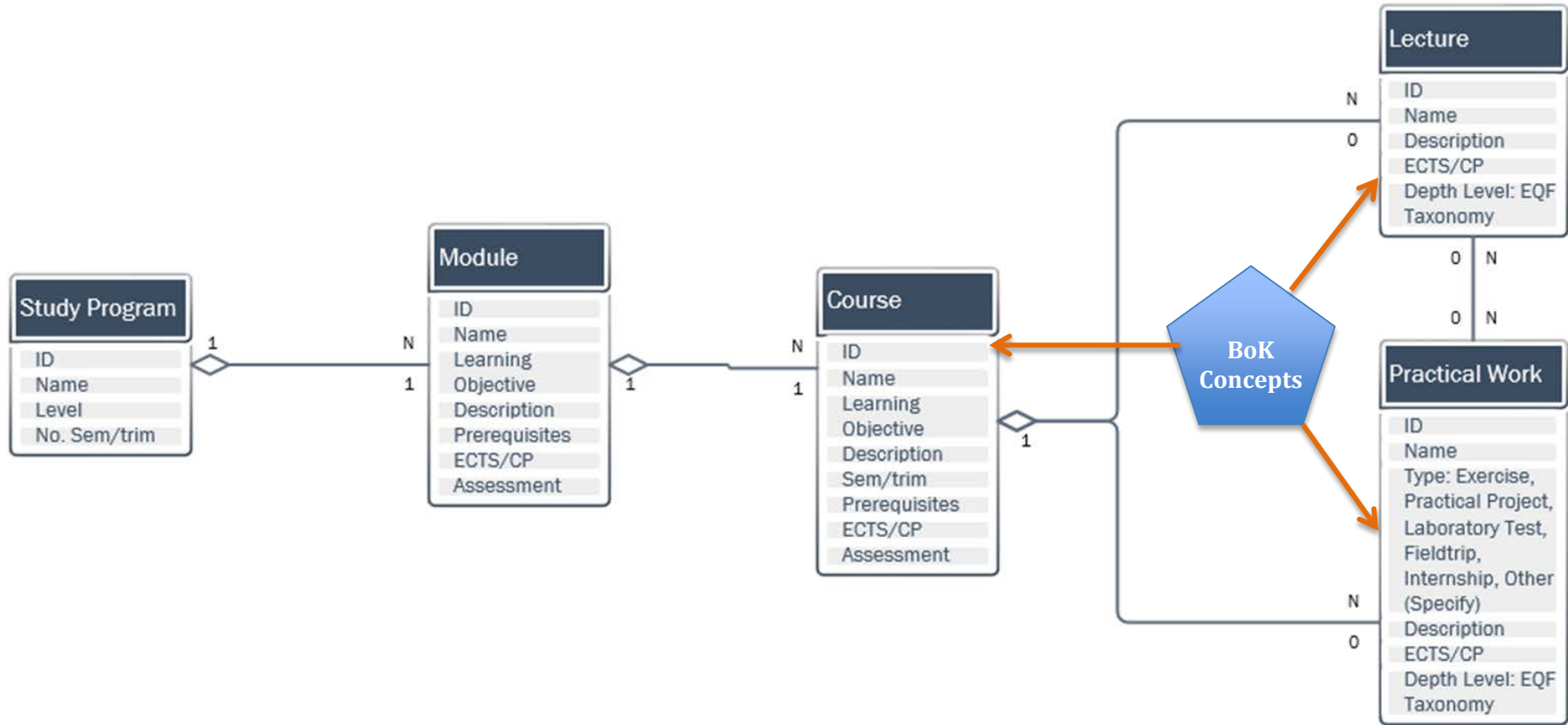
Study Program

- A program comprises the core required and elective courses that lead to a degree or a certificate

Module, Course, Lecture

- A study program is usually splitted into modules. Module comprises one or more courses, which are somehow related, either in time or content.
- A course is a unit of teaching in which normally an individual subject is taught over a longer time period, typically in one academic term (semester).
- Courses typically comprise a number of lectures and/or a number of practical sessions
- A Lecture is an atomic unit of teaching, part of a course

Curriculum Tool Data Model



Curriculum Design Tool

The screenshot displays the Curriculum Design Tool interface. At the top, the user is logged in as 'Md. Imran Hossain'. The main area is divided into two sections. On the left, a large circular bubble chart contains various concepts such as 'Analytical Methods', 'Geospatial Data', 'GIS and T and Society', 'Cartography and Visualization', 'Data Manipulation', 'Data Modeling', 'Geocomputation', 'Conceptual Foundations', 'Design Aspects', and 'Organizational and Institutional Aspects'. A red line connects a bubble in this chart to a node in the tree diagram on the right. The tree diagram shows a hierarchy starting from 'Study Program' at the bottom, branching into 'Image Segmentation and Matching', 'Aerial image interpretation and orthoimagery', and 'Aerial imaging and Remote sensing'. The top node is 'M.Sc. in Photogramme...'. Below the tree is a form with fields for 'Name:', 'Amount of semesters/trimester:' (set to 1), and 'Level:'. A 'Subconcepts [10]' list is also visible, containing items like 'Data Manipulation', 'Data Modeling', 'GIS and T and Society', etc. At the bottom, a red message states: 'BOK service is not available. A cached version of the Body of Knowledge is displayed.(Retrieved: Fri, 20 May 2016 10:12:25 GMT)'. Navigation icons for home, account, curriculum, and logout are present at the top right.

Bok is used to define the content on different levels
Courses (headlines)
Lectures (descriptions)
-> drag and drop

Conclusion and outlook

- VirlaBok now is available, introduced to the stakeholders and further tested in practical use cases
- T.b.c.



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Thank you!
Questions?