

## Statement of usage of BoK in our institute

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### Abstract

We have been discussing different issues of the Geographic Information Science and Technology Body of Knowledge (GI S&T BoK) (Di Biase et al, 2006) since 2006. The start point of dealing with this important initiative was the presentation of Ann Johnson at EUGISES 2006 (Johnson et al, 2006). During this meeting an AGILE initiative was initiated to deal with various aspects of the BoK. One aspect was the "completeness" of the BoK on which a presentation was given at EUGISES 2008 (Reinhardt, 2008). Another aspect was the "European view" on the BoK, which we presented at GI Science 2008 (Reinhardt and Toppen, 2008).

That means in these first 2 years we have discussed several general aspects of the BoK, a short summary of this is listed here:

- The BoK in general is seen as a valuable work, it is considered to be very important and helpful for quite a number of tasks.
- Also the consideration of Science **and** Technology is appreciated. In many other approaches only science was considered before.
- But a BoK of GI S & T should not represent primarily a Geographic point of view (as the available version of BoK does) because it is believed that mainly Geodesy and Computer Science also play an important role within GI Science. This leads to the request to add Computer Science, web based services, Geodesy and GPS more explicit to BoK, preferable on the top level.
- The definition of topics related to basics in Natural Sciences, Mathematics, Computer Science etc. is as important as the definition of GI Science topics
- The core knowledge e.g. for a Master of GI Science should be defined more explicit.
- Laws, directives, initiatives like INSPIRE, Galileo, available data like ATKIS, Data given policies and also the combination of GI with other disciplines in study programs lead to the fact that regional perspectives (like Europe) have to be considered in a Bok.
- An indicator for the depth of teaching should be added to the topics, e.g. Blooms taxonomy

More details about these issues can be found in [Reinhardt and Toppen, 2008].

In the years 2009 and 2010 the author of this paper had to design GI courses and modules in different study programs, namely in Computer Science, Business Informatics and Civil Engineering. The challenge here was to adopt the curricula to the different competence profiles of these disciplines as well as to the number of credit points dedicated to Geographic Information issues in these programs. For the design of these GI courses the BoK was used but in a modified form (Reinhardt, 2011).

An extension / restructuring of the Bok related to a broader consideration of SDI topics was carried out as these issues are not considered properly (in our opinion). This extension will be published soon and is supposed to be the base for further discussions and it is expected (or hoped) that other GI teachers and experts will contribute to further develop this knowledge area.

To be able to handle the BoK more conveniently the text modules of this new extended knowledge area and some other knowledge areas of the existing BoK have been implemented in a database. To ensure the appropriateness of the implementation, of course a data model has been developed first and instigated in a relational database management system.

Furthermore, the development of some functions in form of a software tool is going on. The purpose of the tool is to support selected user activities based on the database implementation of the BoK.

These activities include the definition of GI courses, modules and lectures based on the BoK; graphical representation and the analysis of the content of the defined module etc. As a test scenario for the approach, definition of two existing GI courses for the master education of computer science students and of civil engineering is used.

These examples show that the GI S & T BoK played an important role in our institute primarily in the context of curriculum design

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