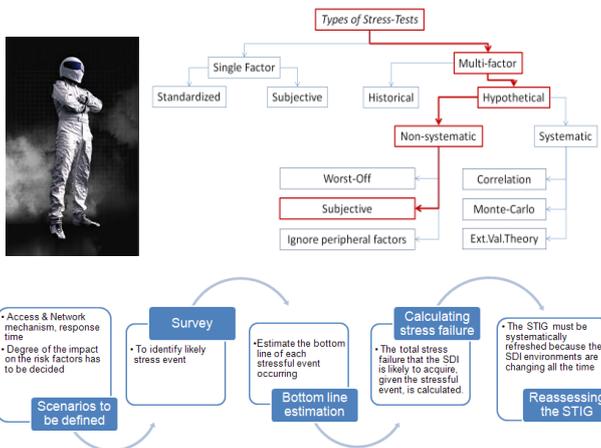


The STIG: Stress-Test for Infrastructures of Geographic Information

Keywords: SDI, Stress test, Financial sector, STIG.

OTB (Knowledge center Geoinformation Governance)

Area of Research: Innovation in the Management of the Built Environment



Research Summary: Currently, Spatial data have always been vital for governments. From local communities to countries and beyond, governments need information on issues as land ownership, road infrastructure, land use, population registration, economic activities and military assets. The term Spatial Data Infrastructure (SDI) refers to clustered initiatives to promote and optimize spatial data access, use and sharing. The actual realization of SDI objectives with regard to spatial data access, use and sharing takes place in the processes of organizations. To stimulate SDI development effectively and efficiently, it is key to assess the progress and benefits of the SDI. SDI is difficult to assess because of its complex, dynamic, multi-faceted and constantly evolving nature. Several SDI assessment methods exist. However, these are still in an infancy stage and none of these appear to meet the requirements of practitioners. As a result, SDI decision makers are still without an unbiased guidance on the success of their SDI. In this research we propose a new method for SDI assessment: The STIG, a Stress-test for Infrastructures of Geographical information. The development and application of the Stress-test methodology will provide new valuable information for decision-makers about the aspects of SDIs that need to be improved in order to fully exploit the potential benefit of the SDIs, especially in the instance of disaster management.

Research Methodology: The starting point for this research is thought that SDIs are organized similar to large financial institutions and therefore is possible to apply the principles of 'Stress-Tests' to a user-oriented SDI. The research questions and the complex nature of SDI assessment resulted in a choice for the qualitative research method using a case study approach (see Yin, 1994). By performing case study research, we generate meaningful results with a small sample group. Further, through the case study strategy it is expected that adequate information for addressing the research questions can be collected. Finally, a case study is expected to be cost-efficient in terms of time, access and cost to participants. The research will be conducted in three major phases divided in 3 steps (figure 3): (1) Explore & Theorize, (2) Validate & Optimize and (3) Review & Evaluate.

Key Publications: Grus, L., Crompvoets, J., and Bregt, A., (2007), Multi-view SDI Assessment Framework. In International Journal of Spatial Data Infrastructures Research, Vol.2, pp 33-53. (<http://ijsdir.jrc.ec.europa.eu/index.php/ijsdir>). September 12, 2010.

Nushi, B., Van Loenen, B., Besemer, J., Crompvoets, J., (2012), Multi-view SDI assessment of Kosovo (2007-2010) - Developing a solid base to support SDI strategy development, Section in Spatially Enabling Government, Industry and Citizens: Research and Development Perspectives, GSDI 13, Quebec, March.



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Main Question: Can Stress Test methodology be implemented to SDI assessment?

Deliverables: The uniqueness of this research is that it aims to develop a stress-test assessment method for SDIs from a user perspective, especially for users from the field of disaster management. This is what makes it an astonishing research and a potential breakthrough in SDI assessment theory.

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