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Dear NSF representative,

it is an honor for us to confirm the ongoing collaboration in open source GIS development with Dr. H. Mitasova and her team. The proposed project "Computational dynamic landscape manipulation and optimization for OPEN source GIS" with the researcher team at the North Carolina State University will be a big step forward to enhance the scientifically founded Geographical Information System (GIS) development, especially in the GRASS (Geographic Resources Analysis Support System) project. I have been involved in open source GIS since 1995 and, in my function as coordinator of the GRASS development, have published this software from 1998 onwards.

GRASS development is based on the Open Source idea. Especially in GIS development environments Open Source brings peer-review qualities through access to source code. Dr. H. Mitasova and her team, working in GRASS development since 1991, have been contributing to the GIS community significant methods and GIS tools.

The collaboration between Dr. H. Mitasova's team at the University of Illinois at Urbana-Champaign and Institute of Physical Geography and Landscape Ecology was loosely established in 1998 with beginning of GRASS 4.2.1 development at Hannover University. Over the last years the contact has been intensified. With the start of GRASS 5.x development modern centralized development tools (CVS) were introduced to support the worldwide development team and to establish controled worldwide access to the GRASS 5 source code.

Apart from the joint intention to provide a full feature GIS software package to the GIS community both teams focus on their individual research projects. However, the results are integrated into GRASS GIS for further testing and general use. Sharing ideas and code plays a key role, as all participants benefit from the shared workload. Parallel development can be avoided and the international collaboration of software engineers, geographers, geologists, DBMS experts leads to synergistical effects.

The contributions of Dr. H. Mitasova and her team form a significant part within the reputation of GRASS. Besides the team's floating point and 3D raster library developments which are

essential for the database management and which makes GRASS a promising system for 3D landscape analysis and modeling, their complex interpolation methods and intuitive visualization tools have been the core GRASS tools. Part of the contributions have been developed in conjunction with Dr. J. Hofierka and his team at Geomodel s.r.o., Slovakia. These sophisticated GIS tools attract both users and new programmers.

In order to improve the educational aspects of the collaboration, plans have been made to invite Dr. H. Mitasova for a GIS intensive workshop within the framework of a graduate course which is currently in application process at Deutsche Forschungsgemeinschaft (German NSF).

The further collaboration with Dr. H. Mitasova and her team at NCSU will continue and focus on new tools for open source GIS, especially the modeling of dynamic landscape processes, which is a focus at the Institute of Physical Geography and Landscape Ecology (Prof. Dr. Th. Mosimann).

Results of the collaboration effort shall be published in scientific journals, and software tools will be integrated into GRASS. Due to the fundamental idea of open source software the results can be used anywhere in the world to support protection of the environment and conservation of natural resources without financial limitations. This allows access to high technologies for even lesser developed countries.

Sincerely yours

Markus Neteler
Coordinator of GRASS Development Team

Prof. Dr. Mosimann
Head of Institute