GLOBAL SPATIAL NETWORK

Leveraging Global Partnerships for Geomatics

and Spatial Information Science

Two Year Business Plan

2011 – 2013

Strategic Partnerships

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Executive Summary

The field of geographic information has lived through enormous technological shifts over the past twenty or thirty years. In the beginning, the number of people involved was relatively small, and it was easier to communicate results and breakthroughs. As the sector has matured, various countries have built institutions to assist in the innovation process. In certain countries, these institutions have a 'network' character, and have been able to make investments in research projects in collaboration with all sectors. In others, there are membership groups that promote the field, but have fewer resources to invest. Despite these differences, there is much to share.

The Global Spatial Network arose as these organizations realized that there was a need to coordinate their research and education activities, and to promote enlargement around the World. An initial meeting was held in Banff, Canada in June 2006, attended by nine groups. The idea of a network for networks emerged, a new level of collaboration. This was followed by meetings in Beijing and Berlin in 2008 and Rotterdam in 2009. Five of these institutions have agreed to form Global Spatial Network, with others wishing to join as 'Affiliate' members.

Global Network of Networks – Leveraging Global Partnerships for Geomatics Engineering and Spatial information Science (hereafter referred to as "Global Spatial Network") operates as an unincorporated not-for-profit collaborative joint venture established in 2010.

Strategic Partnerships

Partnering with other organisations can add capabilities so that the partnership itself becomes greater than the sum of the parts. The strategic partnerships of the Global Spatial Network can provide complementarity, increasing the potential for growth and visibility worldwide. This partnership will allow us to match up with other businesses, as well as strengthen our respective capabilities.

Rationale for this strategic partnership:

- To permit our organizations to grow into new markets

- To allow us to take advantage of economies of scale since we would have a larger base of potential partners

- To offer a unique insight into fulfilling the needs of our partners

- To offer our partners access to new technologies, new R&D and education and training opportunities

- To add credibility to our businesses

Mission Statement

To give networking the highest priority, to leverage global partnerships for research in geomatic engineering and spatial information science, to facilitate education and training, to bid for funds for use by partners, and to help other such networks get established.

What success will look like

Success will involve:

- three or more GSN partners collaborating in at least three research projects with plans for more collaboration in pipeline, plus;

- conduct three or more annual workshops, seminars or symposia, plus;

- have researchers from three or more partners, including post-graduate students, participate in exchange programs with other partners

- be recognised globally as an organisation that is worthy of membership

Members of the Global Spatial Network

There are two types of memberships:

- Full Membership

- Affiliate Memberships

Entities that meet the following criteria will be eligible for Full Membership of the Global Spatial Network:

- use spatial information and related geomatic technology (GIS, positioning and location, remote sensing, photogrammetry, other sensor systems, visualizations etc.) for the benefit of society (public sector and private sector)

- collaborate in a network structure (multi-site, multi-discipline) that involves government agencies, universities, other research organizations and the private sector

- make substantial investments in research that leads to innovations that can be shared

- incorporate the research referred to in paragraph (iii) with training and education for students and professionals; and

- other criteria as determined from time-to-time by the Board,

New member applications will only be accepted through written application to the Board with acceptance subject to meeting the specific criteria and Board approval.

Full members of Global Spatial Network.

(These also comprise the Founding members)

Name of Institution	Location (city, country)	Description of the Link (mention status of commitment)
CENTROGEO	Mexico DF, Mexico	Cooperation on project, student exchanges and projects
Cooperative Research Centre for Spatial Information (CRCSI)	Melbourne, Australia	Cooperation on projects, student exchanges, researchers engaged in common project development, mutual exchange or advisory bodies
Future PositionX	Gävle, Sweden	Cooperation on projects, student exchanges, etc.
GEOIDE	Quebec, Canada	Cooperation on projects, student exchanges, etc.
Korean Land Spatialization Group (KLSG)	Inchon, S. Korea	Cooperation on projects, student exchanges

Affiliate Members

Name of Institution	Location (city, country)	Description of the Link (mention status of commitment)
AGILE	European Union (Wageningen NL)	Student exchanges, joint workshops
MAGIS	St-Etienne, France	Cooperation on projects, student exchangers, joint seminars and workshops; seeking common funding
National Centre for Geocomputation (NCG)	Maynooth, Ireland	Cooperation on projects, faculty and students engaged in Summer School, student exchanges
UCGIS	USA (Seattle WA)	Informal cooperation on potential funding

Institutional curriculum vitae of Members

Centro de Investigación en Geografia y Geomática Ing J.L. Tamayo (hereafter referred to as: CentroGeo)	
Website:	http://www.centrogeo.org.mx
Address:	Contoy 137 Col. Lomas de Padierna, DelegaciónTlalpan, C.P. 14240, Mexico DF, MEXICO
Founded in:	1999
Representative:	Carmen Reyes, PhD
Contact Number:	(52) 2615-2224
Mission Statement:	CentroGeo is dedicated to the generation, transmission and application of knowledge in GIScience and Contemporary Geography, establishing strong bonds with the demands and requirements of society. Technological innovation and development is also a substantial element of CentroGeo's mission.
Total Corporate Members:	12 government; member of several national and international networks (networking over 100 institutions)
Total number of current research projects funded and monetary value of committed investments	12 projects
Total number of researchers	25
Total number of students (master &phd)	35 (current); 93 (over 9 years)
Total research centres:	Over 30 centers and universities
End of funding:	Yearly renewal

Cooperative Research Centre for Spatial Information (hereafter referred to as "CRCSI") through SPATIAL INFORMATION SYSTEMS RESEARCH LTD (ACN 139 387 232)	
Website:	www.crcsi.com.au
Address:	P.O.Box 672, Carlton South, Victoria 3053, Australia
Founded in:	2003
Representative:	Dr. Peter Woodgate
Contact Number:	+ 61 408 252 083
Mission Statement:	To create new wealth and benefits for the participants of the CRCSI through spatial science research, innovation and commercialization; through educational activities; and through powerful collaborations that build institutional capacity.
Total Partners:	95 partners, comprising 64 companies, 16 government agencies, 15 universities and research institutes
Total number of research projects funded and monetary value	12 (with more to come). AUD$180 million (comprising AUD$60 million in cash, AUD$120 million inkind from 2010 to 2018. In CRCSI-1 (2003-2009), AUD$108 million was invested comprising AUD$69 million (inkind), AUD$39 million (cash) and 40 projects.
Total number of researchers	50 EFT (or 200 part-time)
Total number of students (master &phd)	15 growing to 50 (25 completions)
Total research centres:	6
End of funding:	30 June 2018

Future Position X (hereafter referred to as "FPX")	
Website:	http://www.fpx.se/
Address:	Nobelvägen 2, GävleTechnologypark, Building Uppfinnaren, SWEDEN
Founded in:	2006
Representative:	Johan P Bang
Contact Number:	+46-702094525, + 46-26614400
Mission Statement:	Future Position X (FPX) is a cluster organisation with focus on research and development in the field of innovative and expanding use of Geographical Information technology. With our research and development network and centers we enable companies and organizations to develop new products and services and to expand to new markets. We create innovations for the smart city and our common green society.
Total Corporate Members:	40 owners +180 corporate partners
Total number of research projects funded and monetary value	44 191M SEK
Total number of researchers	45
Total number of students (master &phd)	400 (Geometrics + computer science)
Total research centres:	4
End of funding:	End of 2014
Projects:	16 current project - (Smart City Arena, Predict and Act Instead of React – traffic management, ISSC - Integrated Surveillance System for infectious disease in rural China, Waste management and bio gas detection, environment monitoring and sensor networks, crisis management information sharing, geo enabled internet of things)

GEOIDE Inc. (hereafter referred to as "GEOIDE")	
Website:	www.geoide.ulaval.ca
Address:	1055, avenue du Séminaire, PavillonCasault, Local 2306 Université Laval Québec, Québec G1V 0A6 CANADA
Founded in:	1999
Representative:	Prof Nicholas Chrisman
Contact Number:	418-656-5746
Mission Statement:	GEOIDE distinguishes itself as a world-class research project manager in the field of geomatics. It delivers a strong network and a unique multi-disciplinary research partnership to government and industry leaders. GEOIDE's operations generate substantial benefits to society and the economy.
Total Corporate Members:	5 partners and corporate members; 53 corporate affiliates; 42 government; 38 others
Total number of research projects funded and monetary value	121 projects funded, $79.3M CAD ($40.8M GEOIDE funds)
Total number of researchers	118 (current) 395 (over 14 years)
Total number of students (master &phd)	94 (current); 1437 (14 years)
Total research centres:	34 universities
End of funding:	2012
Projects:	24 current projects; see web site. Themes: Mobility, Environmental Change, Distributed Sensors, Canadian North, Sustainable Urban Development

Korean Land Spatialization Group (hereafter referred to as "KLSG")	
Website:	www.klsg.re.kr
Address:	#301 VentureBuilding, INHAUniversity, 253 Yonghyun-dong Nam-gu Incheon 402-751 REPUBLIC OF KOREA
Founded in:	2006
Representative:	Prof Kim, Byung-Guk, InhaUniversity Department of Geoinformatic Engineering
Contact Number:	82-10-9212-7433; 82-32-860-7603
Mission Statement:	GIS Technology leader for ubiquitous land information
Total Corporate Members:	Consortium of54 companies (including 2 government agencies)
Total number of research projects funded and monetary value	5 projects funded, 139 M$ US (105 M$ US from government and 34 M$ US from business)
Total number of researchers	439 (current);4,744 (over 6 years)
Total number of students (master &phd)	109 (current); 1,177 (over 6 years)
Total research centres:	26 universities, 11 research institute
End of funding:	April 2012
Projects:	5 current projects; Themes: GeoSpatial Information based Infra, Land Monitoring, Intelligent Urban Facility Management, Integration of Indoor/ Outdoor GeoSpatial Information, Ubiquitous GIS Core SW Tech.

Note: Member Partner Organizations can be found through partner links on the GSN website.

Institutional curriculum vitae of Affiliate Members

Member Name: University Consortium for Geographic Information Science (hereafter referred to as "UCGIS")	
Website:	http://www.ucgis.org
Address:	PO Box 15079, Alexandria, VA 22309
Founded in:	1991
Representative:	Daniel W. Goldberg, PhD
Contact Number:	213-740-0521
Mission Statement:	UCGIS Mission • To serve as an effective, unified voice for the geographic information science research community; • To foster multidisciplinary research and education; and • To promote the informed and responsible use of geographic information science and geographic analysis for the benefit of society.
Total Corporate Members:	3 corporate members
Total number of research projects funded and monetary value	1 recent research project funded at $53,800
Total number of researchers	1 recent research project with two investigators (Tim Nyerges and Sean Ahearn)
Total number of students (master &phd)	
Total research centres:	65 US universities, 2 non-US universities, 1 national center, 3 professional organizations, 1 government agency
End of funding:	
Projects:	Current: (1) UCGIS/USGS Workshop on Geospatial Semantics, May 29, 2012 Completed: (1) UCGIS Education Committee Model Curricula Project "GI S&T Body of Knowledge" (2) HUD Global Urban Quality (3) UCGIS Workshop on Computation and Visualization for the Understanding of Dynamics in Geographic Domains (4) USGS Vector-Borne Diseases (5) FGDC Framework Survey (6) DHS Geospatial Extension Program

General Objectives

- Facilitating research networking around the world.

- Exchanging students and researchers.

- Helping develop and support education programs that strengthen the capacity of organizations.

- Assisting with internships of students.

- IP registration and sharing in a fair manner (eg. respecting differences in funding levels by Members).

- Benchmarking organizations (eg. how well is each network doing in delivering research and outputs).

- Sharing organizational and management expertise (eg. publishing a state of the world networks document; providing a resource of experience for new networks).

- Providing a resource for international peer-review (mutually for Members and others).

- Preparing joint publications and communications strategies.

- Undertaking joint workshops, conferences, and all forms of joint meetings.

- Helping set national (and super-national) research agendas.

- Responding to short-term needs (eg. disaster situations) with resources available from Members.

- Indexing of expertise and current research (geodatabase).

- Bidding for funding from granting bodies (including government, the private sector and philanthropic organizations) on behalf of Member organizations.

- Helping new networks get established.

- Serving to offer a form of continuity to research efforts that will help smooth out the uncertainties associated with any one member network as they go through the periodic renewal and rebidding cycle.

Details of the Activities

The Global Spatial Network may conduct the activities set forth below, or any others from time to time established by the Board:

- Ensure research networking around the world.

- Operate or encourage exchange programs for students and researchers.

- Develop and support education programs that strengthen the capacity of organizations.

- Operate or encourage programs for internships of students.

- Provide Intellectual Property registration and sharing in a fair manner (eg. respecting differences in funding levels by Members).

- Assist benchmarking for Member organizations.

- Publish a state of the world networks document.

- Share resources for international peer-review.

- Edit joint publications and share communications strategies.

- Operate joint workshops, conferences, and all forms of joint meetings.

- Contribute to national (and super-national) research agendas.

- Respond to short-term needs (eg. disaster situations) with resources available from Members. Record and disseminate expertise and current research (geodatabase).

- Bid for funding from granting bodies (including government, the private sector and philanthropic organizations) on behalf of Member organizations.

- Coordinate joint projects funded by such bids.

- Assist establishment of new networks.

Core Projects Areas

The Board have agreed that the initial core projects of the GSN will focus on the following themes and issues:

- ➢ Disaster mapping capabilities in developing countries

- ➢ Health

- ➢ Think Tank Forum – to brainstorm solutions to industry relevant challenges

- ➢ Education and Skilled capacity building

The strategies and plans developed in pursuit of these core projects will be detailed in the GSN Operations Plan.

Marketing

Members are arranging individual launch events for the GSN to recognize their involvement in the organization. An opportunity is also being sought for a formal launch, possibly to coincide with an international conference to maximize exposure.

A website is under development and intended as a primary promotional tool for the Global Spatial Network.

Governance

Board of Directors

The Global Spatial Network board of directors are :

- KLSG :   Prof. Byung-Guk Kim

- GEOIDE :   Prof. Nicholas Chrisman

- CRCSI :   Dr. Peter Woodgate

- CENTROGEO :   Dr. Carmen Reyes

- FPX: Johan Bang

- Independent :   Prof. Michael Goodchild

Management of Global Spatial Network

The initial officers of the Global Spatial Network are represented by:

- Chair :   Dr. Peter Woodgate (CRCSI)

- President: Prof. Nicholas Chrisman, GEOIDE

- Vice-President: Prof. Byung-Guk Kim (KLSG)

- Corporate Secretary : Ms. Claude Levesque (GEOIODE)

- Treasurer: Mrs. Melanie Plumb (CRCSI)

- Network Manager (TO BE APPOINTED)

Secretariat

The role of the Secretariat is to be performed by each Member organization for a period of two years, on a rotating basis, and is to be aligned with the position of General Secretary. For the next two years, the Secretariat will be established within GEOIDE's administrative center in Quebec City, Canada.The Secretariat will perform such duties as are customarily performed by secretariats or similar administrative offices in organizations substantially equivalent to the Global Spatial Network.

Secretariat objectives:

- Prepare an integrated Business Plan

- Manage ongoing activities, including selecting opportunities, developing relationships with external partners and potential partners

- Identify new research opportunities and stay on top of industry trends (new technology developments, etc.)

- Diversify sources of funding

IP created by the partnerships

Definition

- "Intellectual Property" (or "IP") means the statutory and other rights in respect of patents, designs, circuit layouts, copyrights, confidential information and all other intellectual property rights defined in Article 2 of the Convention Establishing the World Intellectual Property Organization of July 1967;

- "Project IP" means the Intellectual Property created through the conduct of a Project, excluding Background IP and Global Spatial Network IP;

Background IP

In respect to Background IP developed by a Member, The Global Spatial Network must take the following steps in regards to IP responsibilities and protection:

- A Member may make available its Background IP to the other Members for the Activities of the Global Spatial Network in accordance with Global Spatial Network Agreement clause 16.4.

- A Member which makes its Background IP available for the Activities of the Global Spatial Network retains the right to control that Background IP and ownership of the Background IP does not change. Improvements to a Member's Background IP will be owned by the Member which contributes such Background IP.

- The General Secretary must maintain a register detailing all Background IP made available by a Member for the Activities of the Global Spatial Network. This register must contain all

information permitting the complete identification of the Background IP as described and identified by the Member making available said Background IP.

- With respect to that Background IP made available by a Member and any improvements, and as per clause 16.1 f the Global Spatial Network, each other Member will have a non-exclusive, non-transferable, royalty-free right to use that Background IP and Improvements solely for the purpose of the Activities of the Global Spatial Network (excluding the use of such Background IP and Improvements in Projects). Any use of a Member's Background IP and Improvements beyond the scope of the licence granted under the Global Spatial Network clause 16.4, including without limitation, use in the conduct of Projects, will require the prior written consent of the Member which owns such Background IP.

- Each Member will take all reasonable steps to protect the Background IP which is provided to it by another Member, and will not disclose or use such Background IP other than as set out in this clause 16.

Global Spatial Network IP

The Global Spatial Network IP related activities are defined as follows:

Any Global Spatial Network IP arising from the Activities of the Global Spatial Network will be owned by the Member (or Members if more than one, as tenants in common) that create it, and held in trust for the Members in accordance with the Global Spatial Network Agreement.

Each Member will have a non-exclusive, non-transferable, royalty-free licence to use the Global Spatial Network IP for the purpose of the Activities of the Global Spatial Network and for its own internal research purposes, subject to clause 22 as per the Global Spatial Network agreement.

The Board will be responsible for determining the use of Global Spatial Network IP including whether any Global Spatial Network IP is to be patented or registered, the costs of which will be paid from the Bank Account, and each Member agrees to undertake all reasonable steps in order to give effect to such determinations of the Board. The Board will also be responsible for Commercialization of Global Spatial Network IP in accordance with the Board Governance Rules.

Upon the creation of any Global Spatial Network IP, the Member creating it will provide full details of such Global Spatial Network IP to the Board, and the General Secretary will maintain a register of all Global Spatial Network IP.

Budget

The Board of directors established the fiscal year as of June 30th. The following one year budget has been approved by the Board of directors on June 14th, 2011.

Global Spatial Network Budget – (Year 1)	$US
Income	
Member Contributions	10,000
Affiliate Member Contributions	600
Total Income	**$10,600**
Expenses	
Audit Fees	2,000
Bank Fees (including setup costs)	1,000
Meeting expenses (venue hire)	3,000
Media (printing, etc.)	2,000
Administrative expenses	1,000
Total Expenses	**$9,000**
Budget Surplus	**$1,600**

Performance Measures 2011-2013

☐ Successfully bid for funding for two or more Projects from within the three Core Research areas as identified at the Board meeting on July 30, 2011.

☐ Establish an Education Program which will facilitate exchange and recruitment of researchers and which provides an easier pathway for broadly based skilled staff exchange between the nations.

☐ Establish the Global Spatial Network as a self funded and sustainable entity.