Cooperation with spatial information obscured by clouds or the dark side of the moon?

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INSPIRE implicitly affecting inter-agency cooperation and collaboration

(Directive 2007/2/EC)

- Consideration (12)
  - Directive should apply to spatial data held by or on behalf of public authorities in the performance of their public tasks

- Consideration (17)
  - Network services are necessary for sharing spatial data between various levels of public authority

- Art. 4.6
  - Directive shall cover spatial data sets held by or on behalf of a public authority operating at the lowest level of government

- Art. 7.1
  - Where organisations have adopted relevant standards to ensure interoperability or harmonisation of spatial data sets and services, the standards shall be integrated

- Art. 18
  - Member States shall ensure that appropriate structures and mechanisms are designated for coordinating, across the different levels of government
Main question - focus on cooperation effects / implications

- Is INSPIRE visible in current public sector cooperation efforts with geoICT?
- Or is it:
  - Occasionally visible or Hidden (“Obscured by clouds”), because of other having to match / meet interests, motivations, stakes - meaning: INSPIRE only partially implemented
  - Completely invisible (“Dark side of the moon”) - meaning: empirical data do not show any evidence of INSPIRE being met
Conceptual research framework

- To evaluate visibility:
  -> regard geoICT cooperation as system of G2G governance

- Implication: Visibility expressed through political-organizational realities:
  - Formal / informal cooperation and authority structures
  - Command, control and coordination
  - Formal and informal dependencies and interests
  - Dynamics of inter-organizational maneuvering
issues

- theories
- arguments
- real world of practice

- explain
- persuade
Cooperation in the public sector

In the Netherlands:

- 1500 public sector organizations (Ministeries, provinces, municipalities, water boards, etc.),
- Between 5000 and 10,000 (dependent on definition of “public”) organizations with public goal
- Cooperation / integration serves public goal
Information and cooperation

Unclear however:

- What does ICT mean for public cooperation?
- What does cooperation mean for ICT?
- For GEO(ICT): Can geo-information increase the cooperation, or can cooperation support better / different geoICT?
Problem context - 1

At national level there is a need for a better framework to assess G2G(Government-to-government) , especially dealing with GI

Political policies in NL:
“efficient government through better links between different government levels (PvdA)”,
“government as integrated and coherent organization (CDA)”,
“efficiency and efficacy through service orientation in government (VVD)”,
“cost reduction, efficiency and improvement of services through digital government (SP)”.
Problem context - 2

Systems of base registrations have created new responsibilities with regards to ownership, management and use of data

Current methods to describe G2Gs are insufficient to:

- Evaluate how relations between public organizations have been changed as a result of geoICT use
- Whether the relations have become more efficient or effective
Research questions

- Which internal rational and non rational drivers and events play a crucial role in:
  - The establishment of geoICT cooperation
  - The continuing / discontinuing
  - The form and use of geoICT
Normative method would be:
- Organizational theory provides guidelines -> these have only been partially used
- Question is then: how to make sure that guidelines are followed up?

Interpretative method:
- What happens in reality? What do we see?
- Question: how can (which) theory be adapted to this reality?
real world of practice

- theories
  - arguments
    - explain
    - persuade

- real world of practice
  - explain
first line of work

theories → explain → arguments → persuade → real world of practice
ideal world

citizen

politician

public manager

participates & votes

formulates

provides services

implements
real world of practice (1)

- Citizen
  - Participates & votes
  - Provides services

- Politician
  - Formulates
  - Media
  - Private sector
  - NGOs

- Public manager
  - Implements
  - G2G / SDI Integration
  - Think tanks
  - Professional associations
  - Committees
  - Lobbyists

NGOs, media, lobbyists, committees, think tanks, private sector, professional associations, G2G / SDI Integration, provides services, implements.
real world of practice (2)

Collection of movable sets of interests – often political and/or driven by mutual / reciprocal relationships
real world of practice (3)

- citizen

INSPIRE

- politician
- public manager
real world of practice (4)

Which (vested) interests are already within geoICT, and/or connected to geoICT?

After insertion of INSPIRE ball? ->

- New and/or old constellation of interests?
- Development of new problems and/or problem contexts?
- Effect on governance?
GeoG2G - Methodology

GeoG2G -> investigate drivers for Geo - G2G (Integration / cooperation through:

- Exploration / overview of cases / workshops
- Case studies with different degree of institutionalized degrees of cooperation, and different degrees of “closeness” to INSPIRE
- Analytical framework focusing on governance issues
- Analytical approach with qualitative interview analysis and discourse analysis
Case 1 - Cadastre <-> Municipalities

- ZBO Kadaster with municipalities

Parcel based information systems
Addresses
Buildings
Locatie
Provincie: Overijssel
Regio: ENSCHEDE
Woonplaats: ENSCHEDE
Postcode: 7512

Gemiddelde koopsom (aantal) van de buurt 7512 in 2007

- Vriestaand: € 287.083 (6)
- 2 onder 1 kap: € 170.488 (23)
- Hoekwoning: € 149.512 (4)
- Tussenwoning: € 146.500 (8)
- Appartement: € 131.833 (6)

Bestel de koopsommen van deze woningen
Bestel het uittreksel kadastrale kaart
Practice

- Technology: DB’s integrated with GIS data
- Cooperation: formalized via different laws; implementation is partly free
- Bottlenecks: how to deal with heterogeneity (in terms of ICT / municipality size / resources / political priorities) of municipalities + different roles of Cadastre in relation to municipalities
- Effect on governance: stronger role of Cadastre; counter movement of municipalities
Case 2 - AHN - General Height information NL

Steering Comittee AHN – www.ahn.nl.

AHN covenant parties:
• Union of water boards – 27 Water Boards
• Public water department
• (IPO and 12 Provinces)
Practice

- **Technology:** sophisticated Laser scanning resulting in data for GIS
- **Cooperation:** via covenant
- **Driver for cooperation:** efficiency in information processes; basic registration
- **Bottlenecks:** administrative / political relation with provinces (& users);
- **Governance:** reinvention of relations of water boards with other water managers; declining role of provinces
Case - 3 Sabimos - “’live” public transport info via geolCT
Practice

- Technology: integrated GPS, Management Information systems, public information systems and traffic systems
- Cooperation: arranged through different levels of agreements
- Key driver for cooperation: political objective of local and regional mobility
- “bottleneck”: integration with other political priorities in mobility domain (OV - card)
- Governance: flexible yet reinforcing local authorities
# Findings GeoG2G cases - political-organizational view

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Vested interests in geoICT

- Most of decisions on cooperation and integration are made through professional and institutionalized associations and representative structures
- Most (new) GIS operators and technologists are not represented in these
- Rationality of technological decisions thus reflect and re-inforce existing power relations
Effects on governance

geoICT / INSPIRE causes a sequence of

1. centralization (need for standards, formalization),

2. decentralization (opposition to standards, alternative standards, autonomous solutions, flexible solutions) and

3. re-centralization (new associations, new maneuvering

- Inter-agency cooperation changes from reciprocity relations to more top-down / principle-agent relations
Further research

- Other cases and more longitudinal qualitative research
- More quantitative validation - is ongoing through survey
- Theory building based on both types of research
- Candidate theory extensions:
  - Resource dependency theory
  - Information ecology
  - Transaction cost / institutional theory
Questions / comments?