THE COMMON INFORMATION SPACE
A New Concept for Information Sharing for Public Safety

2015-05-27 | Christian Flachberger
Why a Common Information Space?
→ A typical Crisis Room (August 2013)

→ Paper Maps
→ Whiteboards (incidents, tasks, ressources)
→ Communication Technology (phone, mobile, PMR)
→ Emergency Plans (mostly paper)
→ Situation Reports (paper, fax, email)
→ Notebook Computer (office applications)

The Next Level of Complexity

Cross-organisational Collaboration
The Next Level of Complexity
The Challenge of a Common Operating Picture COP

How information is shared today:

„Push a piece of information on intention“

Is my picture

... Complete???

... Relevant ???

... Up to date ???

COP = „Common Operating Puzzle“ ???
The Goal of Crisis- and Emergency Management

To get the power to act proactively!
Usage of social media (Taranis2014.eu)

Collaboration and Shared Situation Awareness:
- crisis center
- emergency management organisations

... complete ???
... up to date ???
... relevant for me ???
... geographical assignable ?
The Future: Common Information Space CIF

Information is shared within a common information space. This is done (semi-)automatically, controlled by information sharing policies. All decision processes benefit.

Geo- and timereferences as well as standards for semantics, syntax and distribution allow machine processing of information.
Which information will be shared?
Who would participate?
Collaboration and Information Exchange

- **Civil Protection**
  - Crisis management departments on regional and national level
  - MoI, Department of Health, Department of Infrastructures

- **First Responders**
  - Police
  - Fire
  - Ambulance
  - Armed Forces

- **Critical Infrastructures**
  - Highway Agency, Railway
  - Power Companies
  - Telecom Providers

- **Specialised Institutes**
  - Geodynamics
  - Weather

- **The Citizens**
Common Information Space

International Development
→ USA 2004 - 2013

→ From the vision towards pilots

→ “UICDS”
→ USA 2014 - today

→ Rollout and Implementation!
→ “XChangeCore”

XchangeCore

Two applications don't talk? Data sitting in one system needed in another? Hundreds of web services waiting to be discovered? Looking from one screen and wondering where on your map the data goes?

Europe

Pilots within FP7 and Horizon 2020

DRIVER
37 partners from 13 European states driving innovation in crisis management for European resilience

EPISECC
Common information space for collaborating control centres

SECTOR
Secure European Common Information Space for the Interoperability of First Responders and Police Authorities

REDIRNET
Emergency Responder Data Interoperability Network

C2SENSE

SecInCoRe
Secure Dynamic Cloud for Information, Communication and Resource Interoperability
All These Projects Have to Solve Similar Problems

Layers of Interoperability

Project ESENET (FP7)  [http://www.esenet.org/project/what-is-esenet/](http://www.esenet.org/project/what-is-esenet/)
Towards a Best Practise for Europe

Well Established Standards

- Web Services and SOA Standards
  SOAP, REST, ATOM Feeds, RSS
- OGC Standards
  wms, wfs, sos
- OASIS Standards
  CAP, EDXL

Semantic Challenge

- JC3IEDM
- TSO
- Domain-specific best practise:
  … relief items catalogue of the IFRC
  … dangerous goods labeling

Similar Technical Approaches

Technical View
Graz 2015:
Starting Point for
a new Capability of Information Sharing throughout Europe!

(I assume, we could achieve this, if we harmonize our approaches)