

Rescue in Underground Facilities 3-3-2011 Rome

European situation on mobile communication

Helpen Nederland veiliger te maken

Hans Borgonjen

Senior Coordinator international standardisation

Vts Police Netherlands

Vice-chairman TETRA Association

Chairman Public Safety Radiocommunication Group

LEWP Radio Expertgroup member



● vts Politie Nederland

Powered by vtsPN

Agenda

Vts Police Netherlands

Schengen initiatives

Law Enforcement Working Party (LEWP):

ISI

Broadband + Frequencies

The PSRG workshop February 2010 in Brussels
+ December 2010 Amsterdam

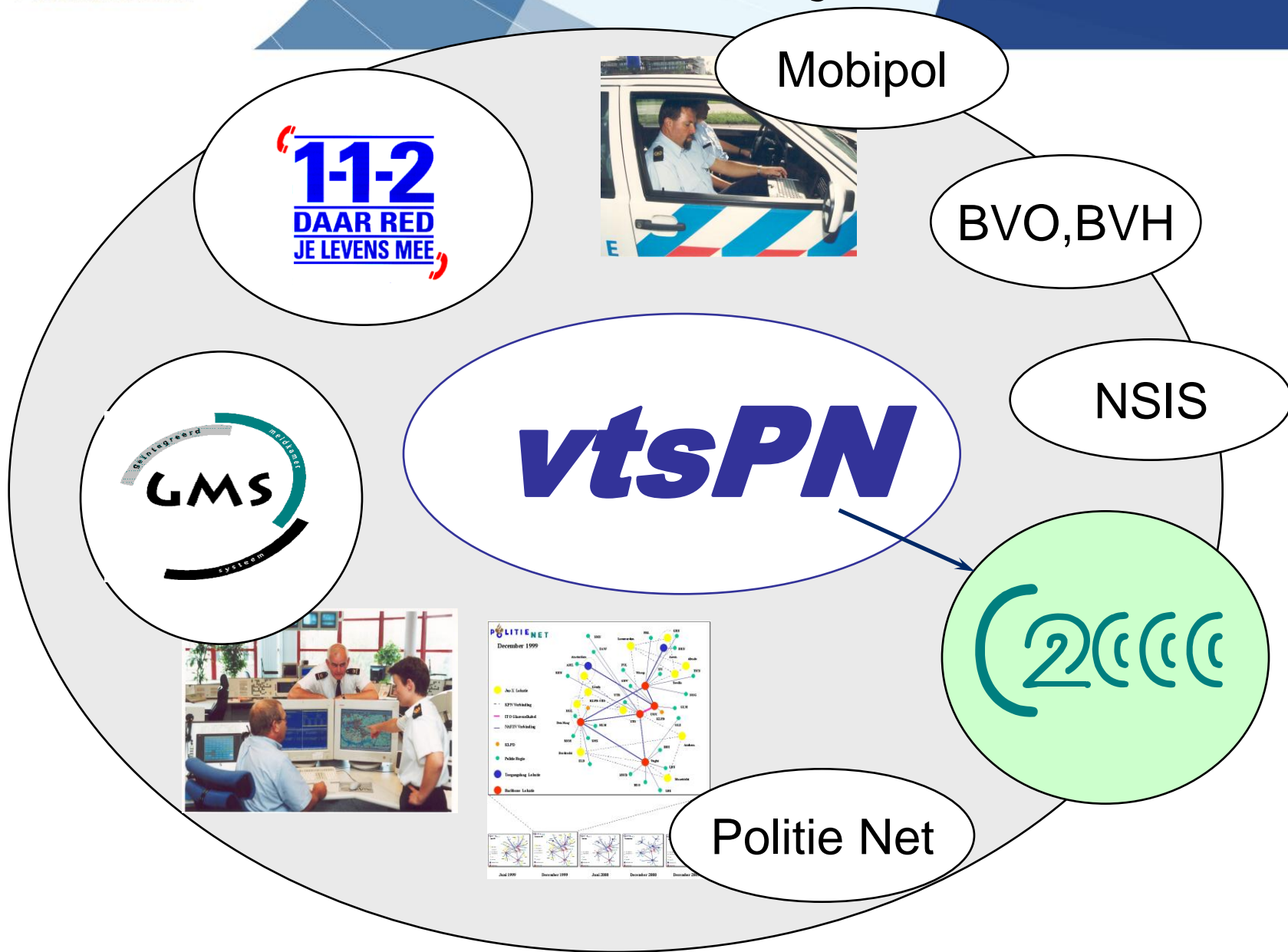
vtsPN responsible for Public Safety IT



***Vts Police Netherlands
for information and
communication
technology:***

- Police
- Fire brigade
- Ambulance Services
- Military Police
- Justice

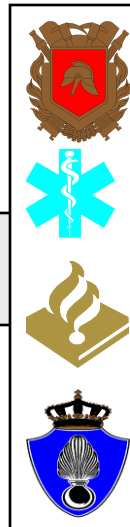
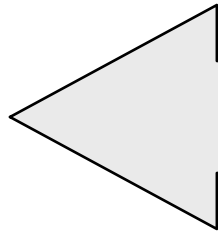
vtsPN responsible for Public Safety IT



C2000: a country wide, Tetra radio network



C2000



Fire Brigade

Ambulance Services

Police

Military Police

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Official rules in Schengen

GENERAL SECRETARIAT

DG-H COUNCIL OF THE EUROPEAN UNION

EU Schengen Catalogue

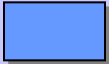





11.2. Long term measures

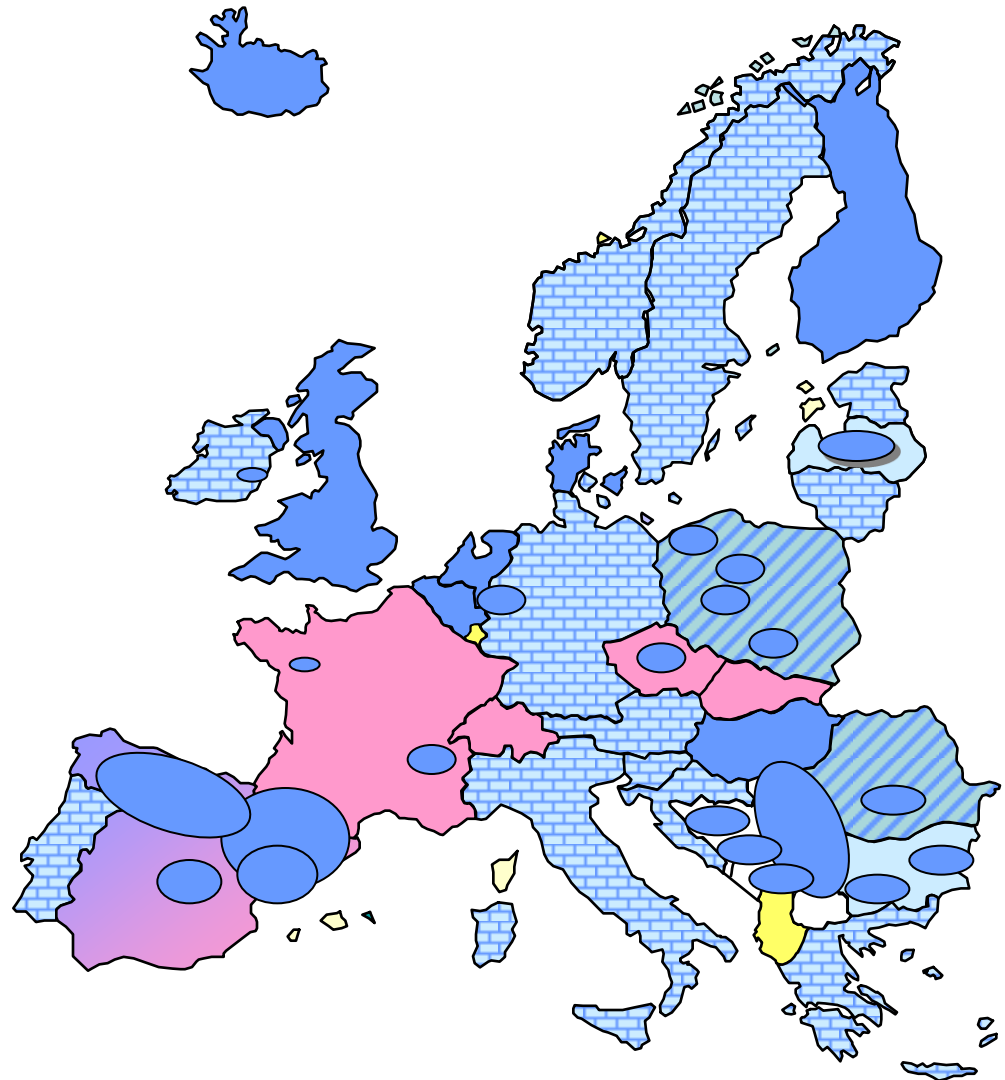
- Schengen States shall implement national digital radiocommunications networks for their emergency services,
- in the harmonised frequency band of 380 – 400 MHz.
- The networks shall be based on TETRA or TETRAPOL systems,



Critical communications for all professional users

European Public Safety Networks

Key	
Nationwide TETRA	
Regional TETRA	
Nationwide TETRA under construction	
Project in progress likely to be TETRA	
Other technologies	
No project known	

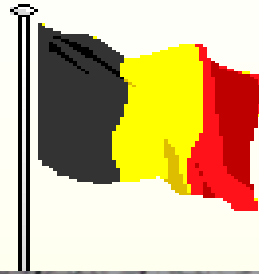
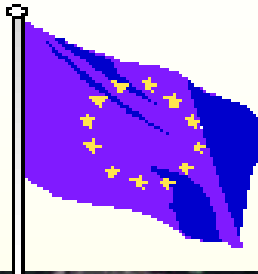




Bundesministerium
des Innern



Three-Country Pilot Aachen – Luik (Liège) – Maastricht

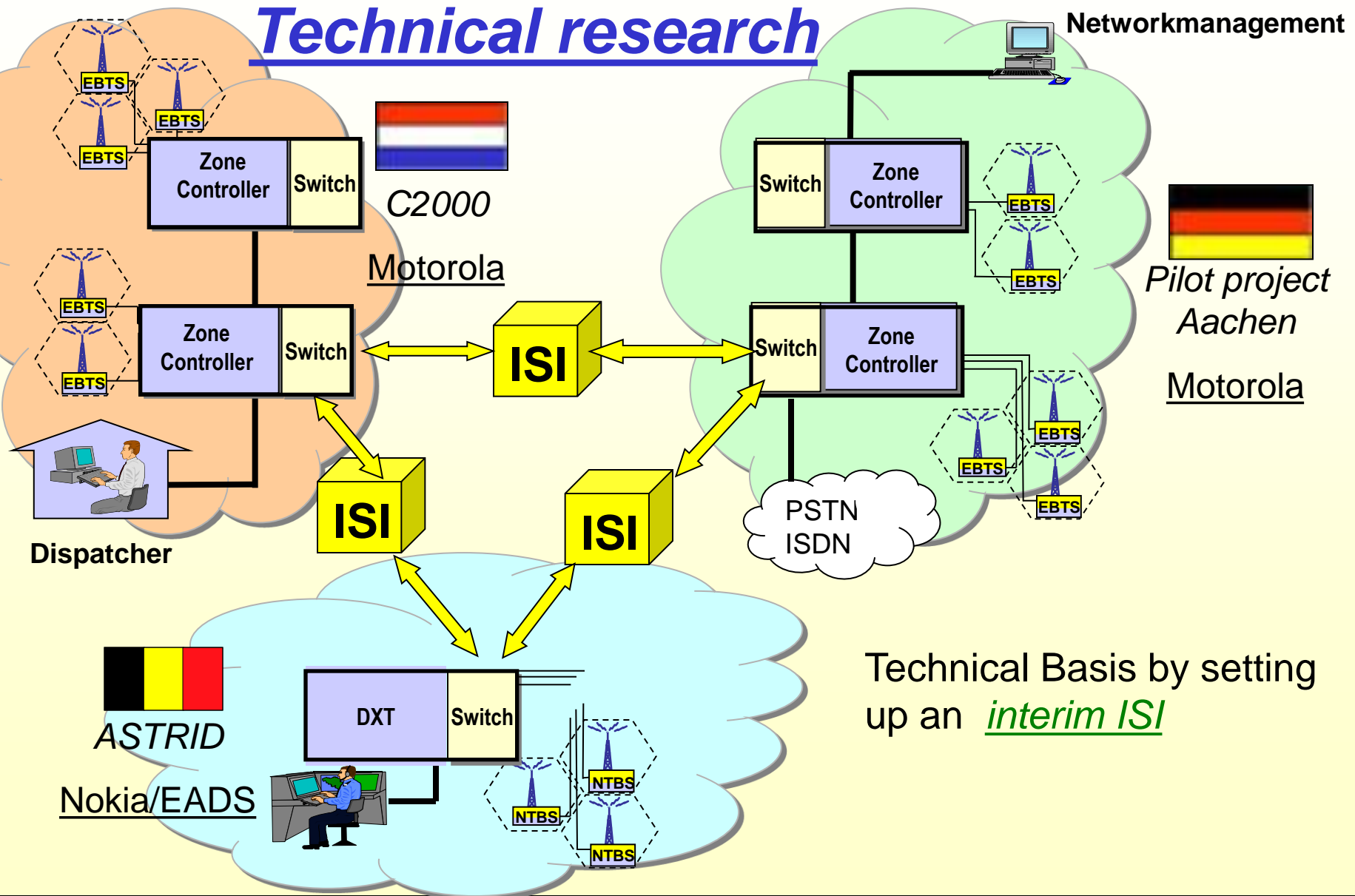




Three-Country Pilot

Aachen – Luik (Liège) – Maastricht

Technical research





Three-Country Pilot Aachen – Luik (Liège) – Maastricht



Operational Research

was applied during the operational field trials.

The goal was to detect as many instructive elements as possible.





Bundesministerium
des Innern



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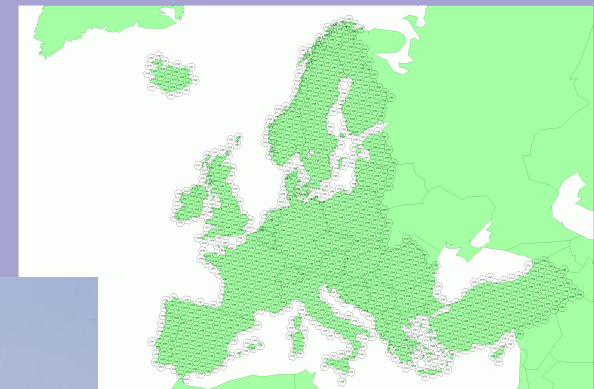




Air-Ground-Air radio communication

The Europe-wide frequency plan

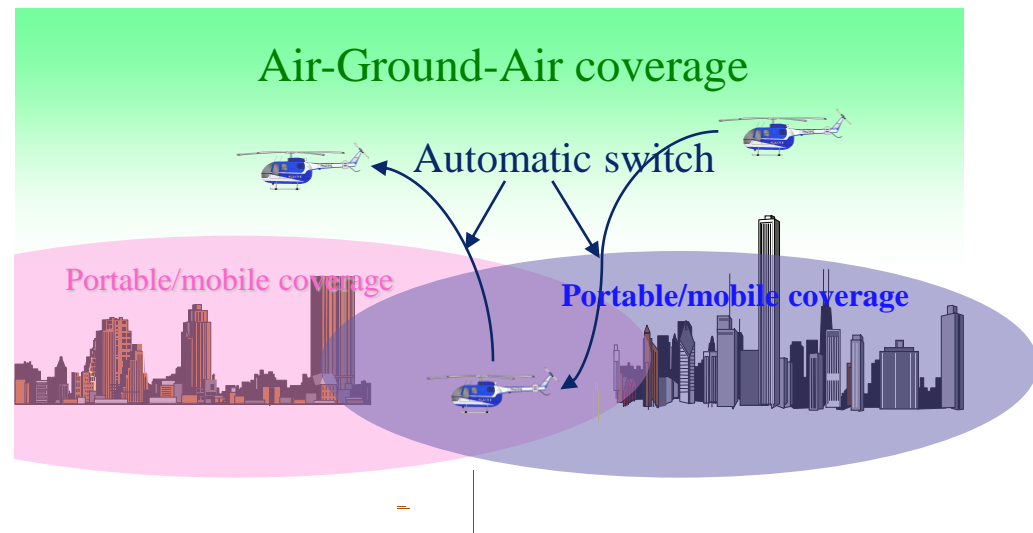
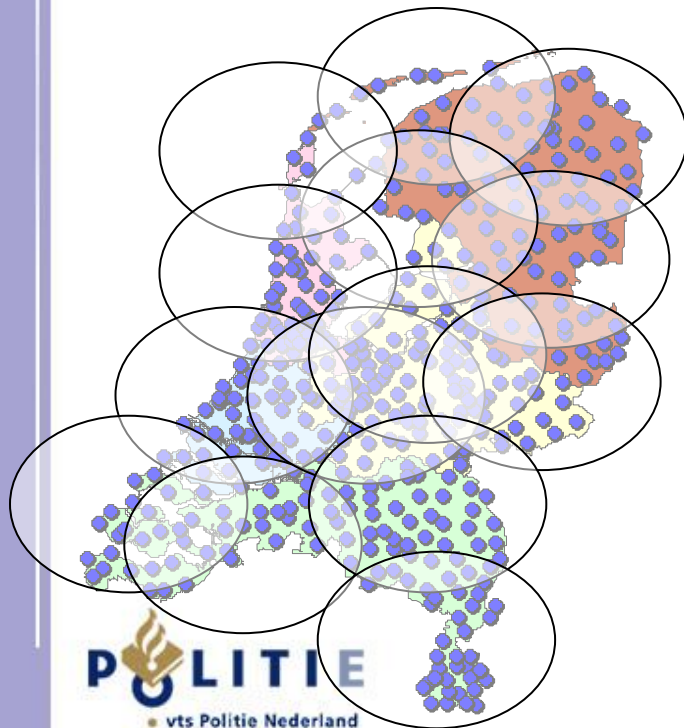
Kees Verweij



Background

Air-Ground-Air (AGA) layer

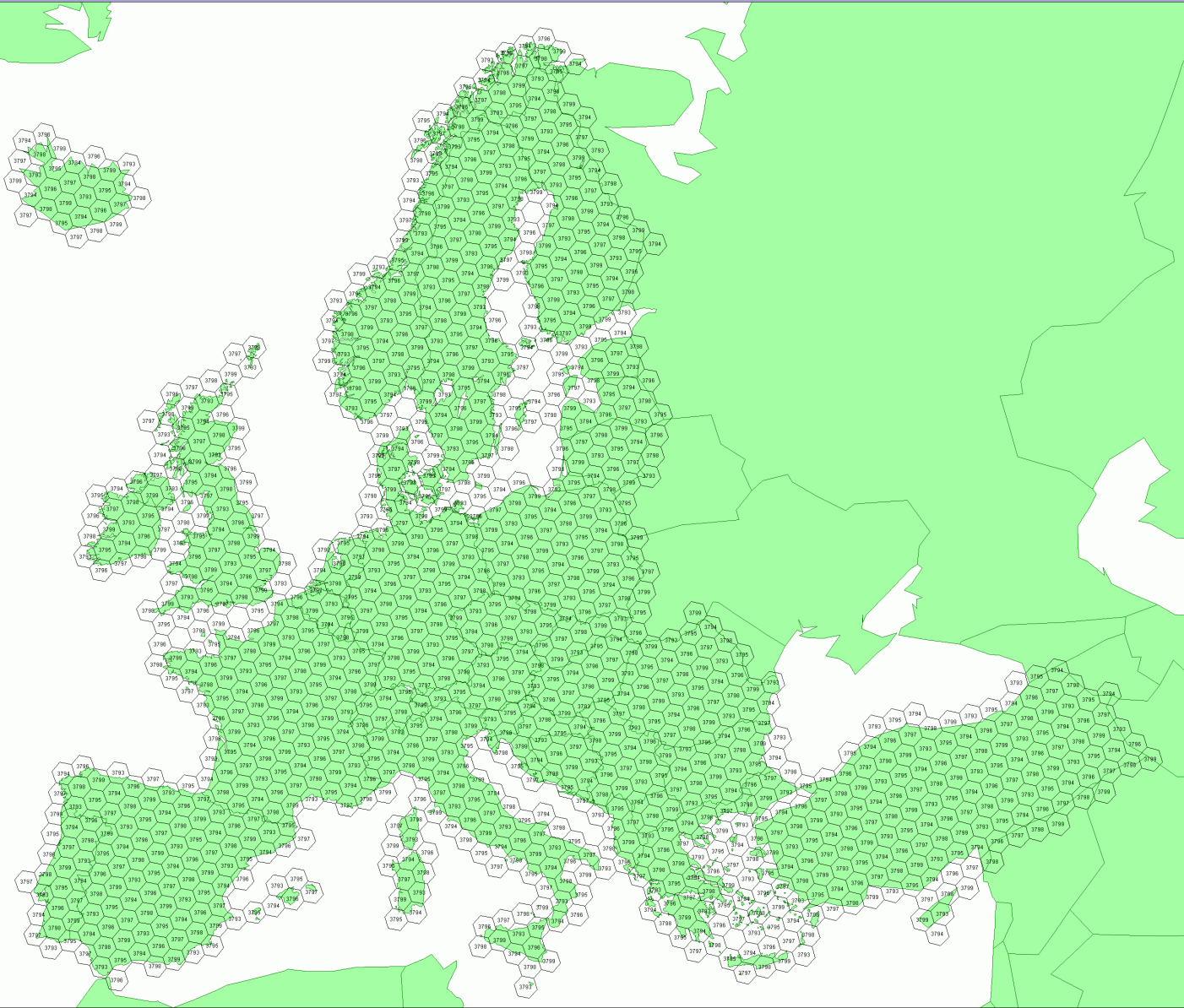
- Integrated Air-Ground-Air overlayer network with separate frequencies and large cells
- → same communication facilities as normal users
- Automatic switching during take-off and descend
- → full service on the ground and in the air



Proposal: What does it look like?

Overview

CHANNEL	LAT	LONG
3793	34,944648	33,523981
3794	34,306819	33,016826
3793	35,030420	27,019467
3797	35,628938	33,105179
3795	36,313280	32,676458
3793	36,346311	31,726731
3799	34,986633	32,596705
3796	36,216727	34,571840
3797	36,153268	35,516838
3795	36,850613	35,113175
3793	36,909865	34,156304
3794	36,270075	33,624938
3798	35,581344	34,042215
3799	35,523764	34,977568
3796	36,701455	37,020174
3797	36,611646	37,969645
3795	37,321182	37,592936
3793	37,407152	36,631106
3794	36,781128	36,067909
3798	36,079742	36,459610
3796	37,118558	39,507093
3797	37,002038	40,458772
3795	37,722874	40,110799
3793	37,835948	39,146347
3794	37,224963	38,551707
3798	36,511761	38,916001
3799	36,401865	39,858929
3796	37,466154	42,027390
3797	37,322678	42,978899
3795	38,053848	42,661297
3793	38,194291	41,696683



DMO: international model

10 DMO channels dedicated for international use

EURO 1 – 10

Procedure how to use it

e.g. which channel to use to avoid interference

Indication of 'out of range risk'

West Balkan countries

Joined project on cross border control

Radio communication is essential

They adopt the West European model



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Radiocommunication Expertgroup (RCEG)
ISI
Broadband + Frequencies

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LEWP: Law Enforcement Working Party

(former Police Cooperation Council)

Expert group on radio technology + frequencies

Task: 1) medium term solution interoperability

Tetra-Tetra +

Tetrapol-Tetrapol +

Tetra-Tetrapol

2) long term solution mobile broadband data

Harmonised technical standard

Harmonised frequency band



The situation

- Current situation
 - Each nation wide radio network is separated from each other
 - 3 companies have developed nation wide networks



MOTOROLA



SELEX
Communications

- 2 technical standards



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Tetra-Tetra + Tetrapol-Tetrapol + Tetra-Tetrapol

2) long term solution mobile broadband data

Harmonised technical solution

Harmonised frequency band

Council - COMIX recommendation

Effective cross-border cooperation requires **adequate communication capabilities including interoperable radio communication systems** in border areas and between operational services from different Member States

In the long term, law-enforcement and public-safety radio communication systems will need to support and to be able to **exchange high-speed mobile data information**; current law-enforcement, public-safety and **public networks may not be able to support this**

The advantage of a common solution

In the past:

Harmonised frequencies: 380-400 MHz

European standard: TETRA

Now for broadband data the same philosophy !!

European solution offers better solution, multi-vendor, more choice, lower prices, future proof and cross border cooperation

Agenda

**The PSRG workshop February 2010 in Brussels
+ December 2010 Amsterdam**

Turkish Airlines Schiphol Feb 2009



Queen's Day Parade Apeldoorn Apr 2009



Workshop on use of Tetra networks in crisis's + large events

Initiative from PSRG based on Dutch experiences

Held in Brussels 22-2-2010
50 persons from 10 countries

Goal: lessons learned from different countries
Presentations from UK, Belgium, Denmark, The Netherlands

Report available on Tetra Association website
Dutch + French translation available

Follow-up workshop on fleetmaps/talkgroups + training (incl. e-learning)
7th December Amsterdam

Lessons learned

Talkgroups are the result of the organisational structure

Radio discipline should come back

Radio communication officer should come back

Training should be better and not only once

Dragging home talkgroups creates capacity risks

Extra mobile basestation only useful if longer or pre-planned

Way of working same as normal

Belgium fleetmap model seems to be good

Train crash, Halle , Belgium

Feb 2010



Follow-up Workshop December 2010 Amsterdam

35 people from 8 countries

Focus on:

- Fleetmaps + talkgroups
- Education: training + E-learning
- Role of operator

Summery from the 3 sub workshops:

Role of the operator.

- Communication between the operator and user is the key.
- A user committee is important and needs to have enough mandate.
- During a crisis there must be a liaison between the user and the operator; a radio communication officer can offer an important coordination role.

Fleetmapping.

- Less talk groups.
- Start with predefined organisation and communications schemes.
- The fleetmap follows the communication scheme which follows the organisation model. (Who is in the lead is a important issue)

Education.

- E- learning is not enough; combine it always with personal practical training situations.
- Keep it simple.
- Training should be done constantly; certification is useful; also train crisis situations.

Thank you for your attention

Questions ?