PSC-E 7+8 June Brussels

European situation on mobile communication

Helpen Nederland veiliger te maken

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Vts Police Netherlands

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Chairman Public Safety Radiocommunication Group
LEWP Radio Expertgroup member

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Agenda

Existing networks

Map of Europe

Air ground air frequencies

DMO frequencies

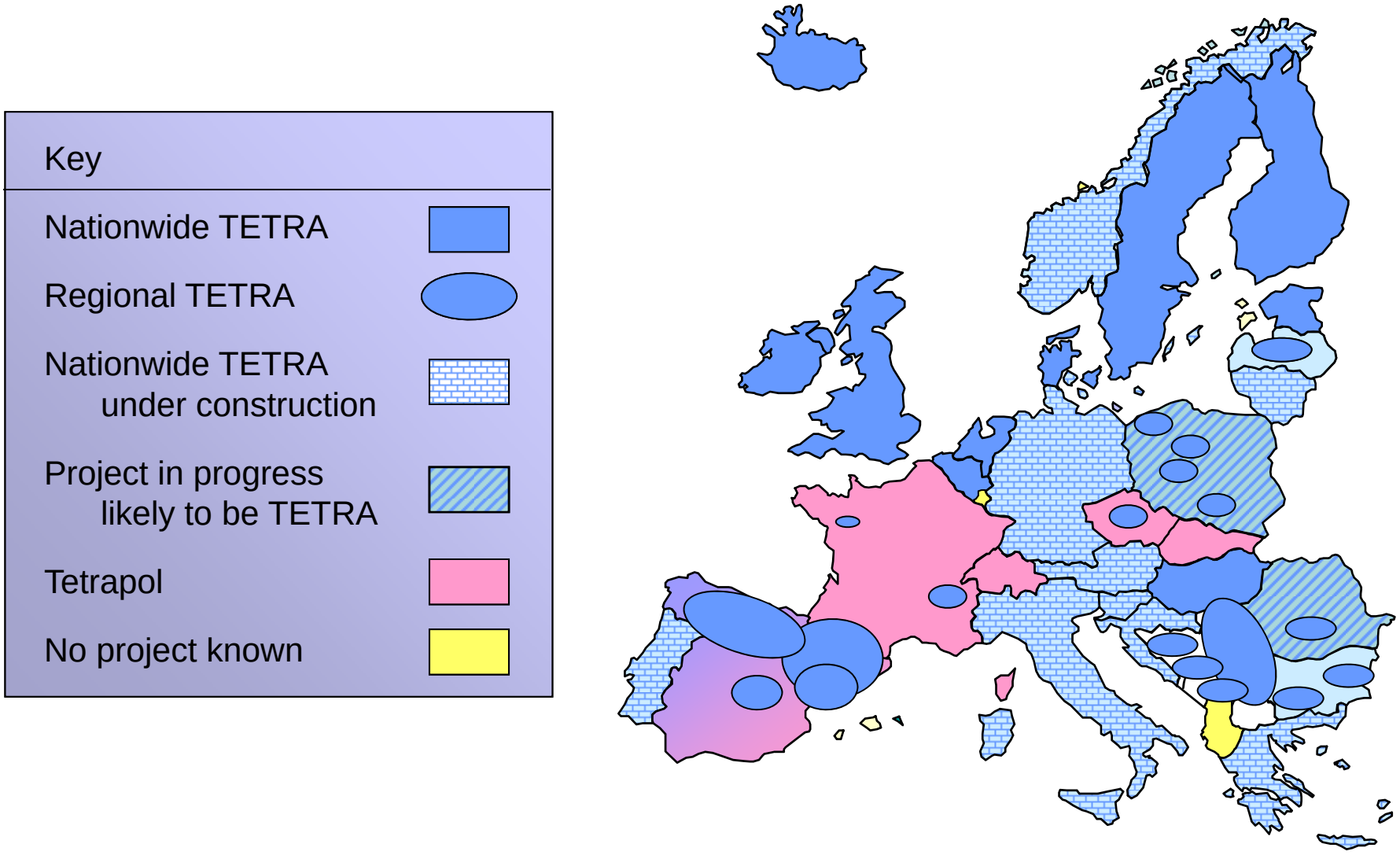
The PSRG workshops on crisis's + large events

Law Enforcement Working Party (LEWP):

ISI

Broadband + Frequencies

European PPDR Networks



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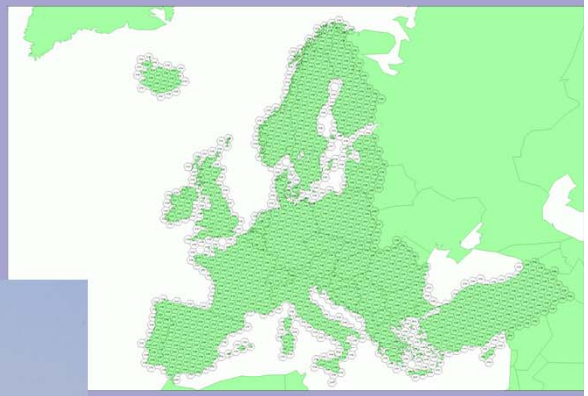
Air-Ground-Air radio communication

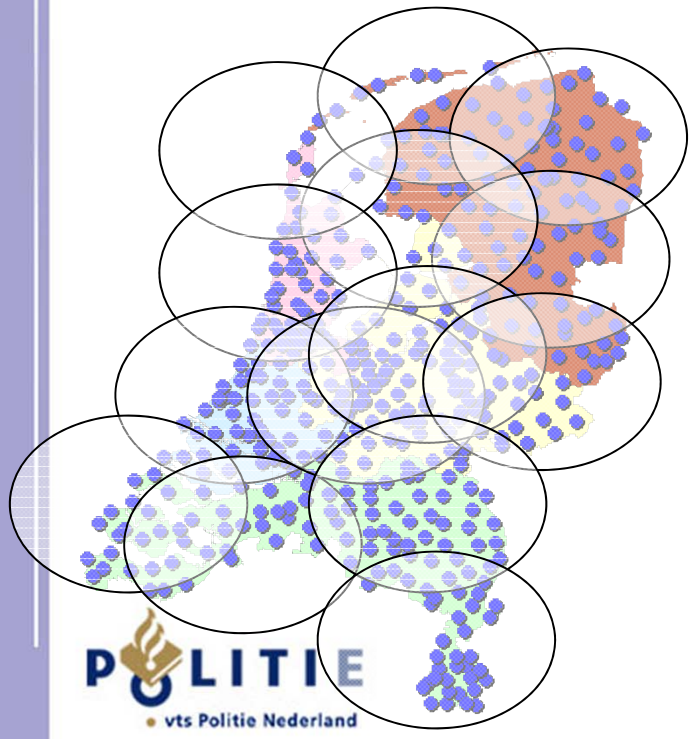
The Europe-wide frequency plan

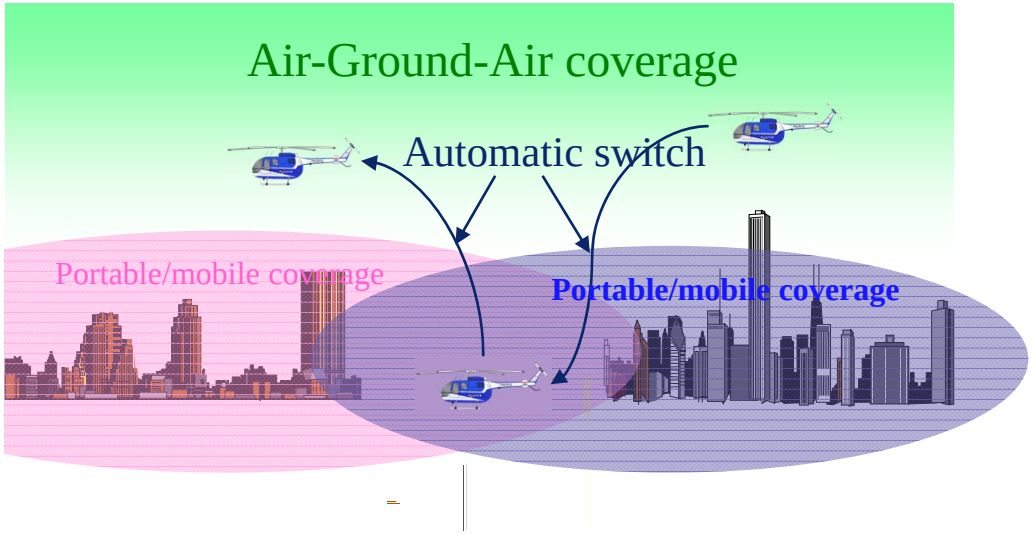


Kees Verweij

Background
Air-Ground-Air (AGA) layer

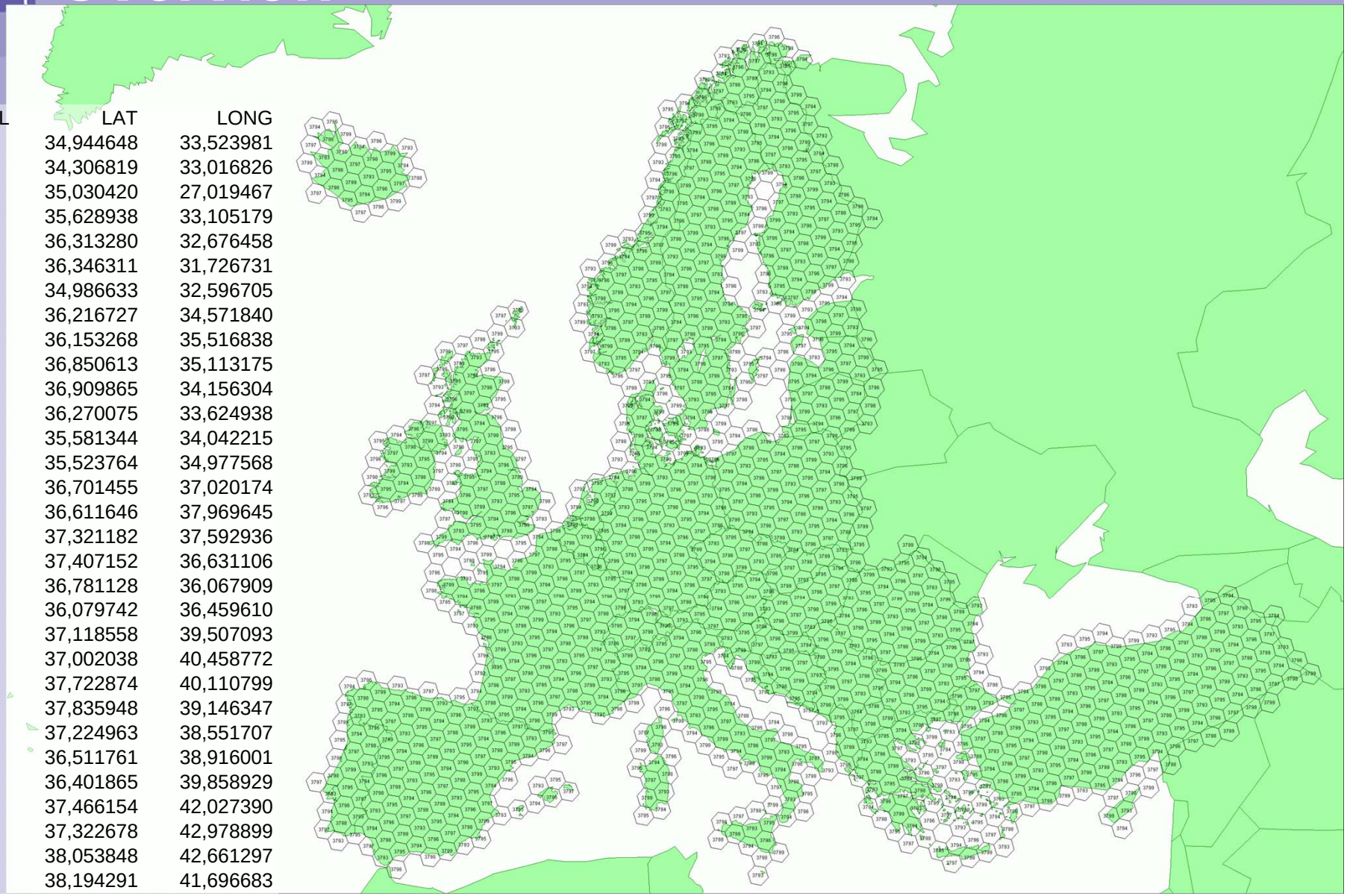
- Integrated Air-Ground-Air overlayer network with separate frequencies and large cells
- → same communication facilities as normal users
- Automatic switching during take-off and descend
- → full service on the ground and in the air





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’

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West Balkan countries

Joined project on cross border control

Radio communication is essential

They adopt the West European model

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Mission critical

The PPDR world is mission critical

We need mission critical (group) voice communication
+ mission critical mobile data communication

Examples everywhere
Some close by, some far away
pleasant + unpleasent ones:

Turkish Airlines
Schiphol Feb 2009

Queen’s Day Parade
Apeldoorn April 2009

Train crash Halle Belgium - Feb 2010

European Football - Bern 2008

Notting Hill Carnival – annual event

Tsunami Japan

Tsunami Japan

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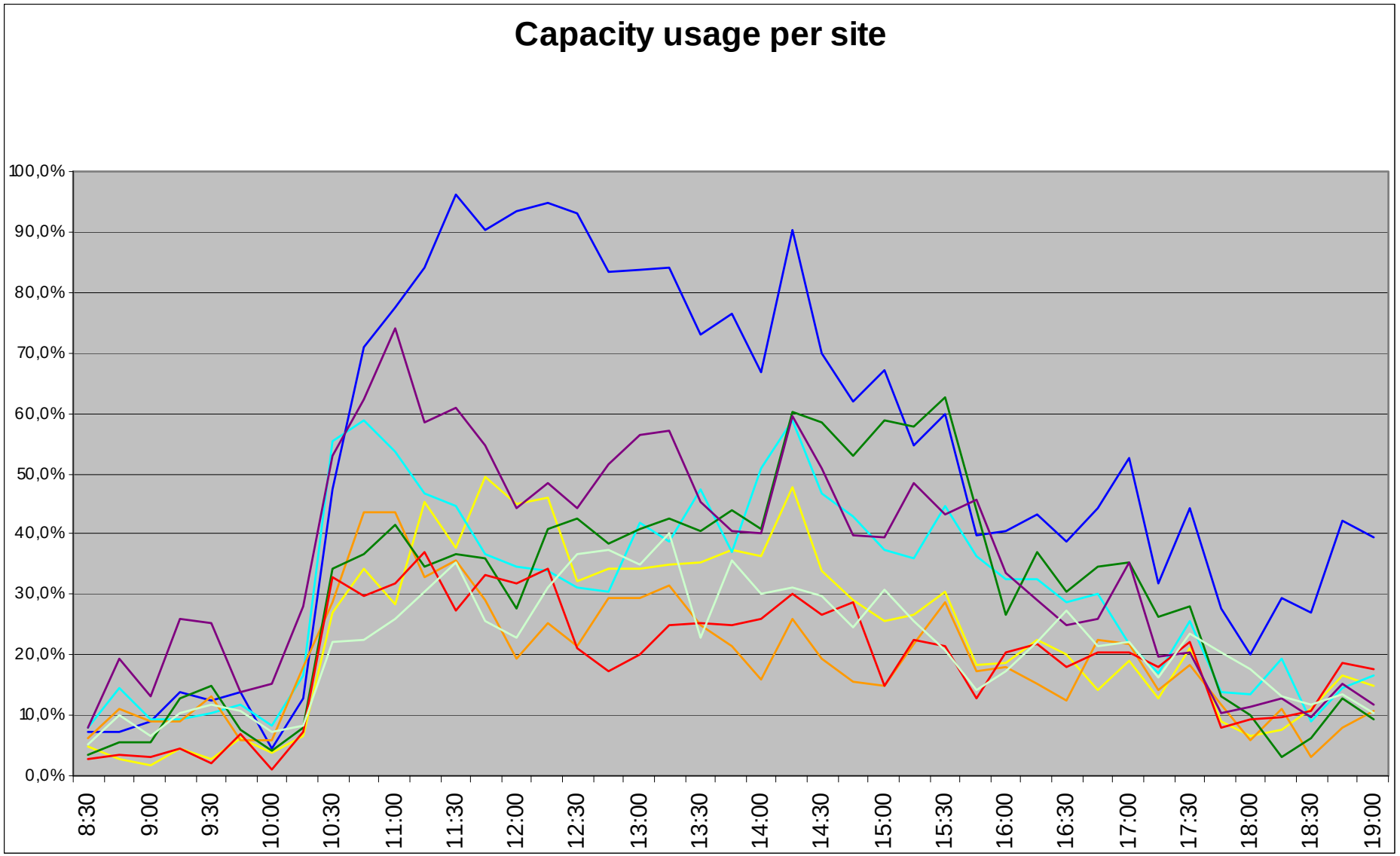
Use of Tetra networks in crisis's + large events

The PSRG workshop February 2010 in Brussels + December 2010 Amsterdam


Capacity usage per site
100,0%
90,0%
80,0%
70,0%
60,0%
50,0%
40,0%
30,0%
20,0%
10,0%
0,0%
8:30
9:00
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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

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Lessons learned

Talkgoups 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

Follow-up Workshop December 2010 Amsterdam

35 people from 8 countries

Focus on:

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

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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.

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Agenda

Existing networks

Law Enforcement Working Party (LEWP)

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 for interoperability

Tetra-Tetra + Tetrapol-Tetrapol + Tetra-Tetrapol

2) long term solution mobile broadband data

Harmonised technical solution

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Council - COMIX recommendation

ctive cross-border cooperation requires **adequate communication**
pabilities including interoperable radio communication systems
border areas and between operational services from different
ember States

he long term, law-enforcement and public-safety radio
mmunication systems will need to support and to be able
exchange high-speed mobile data information;
rrent law-enforcement, public-safety and **public**

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Council - COMIX recommendation

RECOMMENDS that

The Electronic Communication Committee (CEPT / ECC) be tasked to study the possibility of **obtaining sufficient additional frequency allocation** below 1GHz for the development of future law-enforcement and public-safety voice and high-speed data networks

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Council - COMIX recommendation

RECOMMENDS that

European standardisation bodies be invited to start producing **a European standard** satisfying law-enforcement and public-safety services' operational requirements regarding **high-speed data communication** and roaming functionality in the medium term

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The advantage of a common solution

In the past:

Harmonised frequencies: 380-400 MHz + European standard

Now for broadband data the same philosophy !!

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

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LEWP frequency statement

Mid November 2010 statement from LEWP:

- 2x1,5 MHz for existing systems
- 2x3 MHz in 410-430 MHz (second option 450-470)
- Broadband: provision of user requirements

Belgium presidency has send the statement to ECC, CEPT-FM, CEPT-FM-PT38

FM38 meeting in Helsinki december 2010:

- 2x3 MHz WB in 410-430 + 450-470
- 2x10 MHz BB: further study (2nd Digital Dividend: 700 MHz??)

CEPT FM meeting January 2011

- New PPDR group for further work (based on EC high level workshop?)

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EC ‘PPDR high level workshop’ 30 March on mobile data communication

- Organised by European Commission as part of the European frequency policy.
- Neelie Kroes: ‘digital agenda’: (mobile) internet for all Europeans + ‘economical grow Europa’
  → Commercial operators claim very much
- PPDR is most time ‘mission critical’, needs dedicated solutions + dedicated harmonised frequencies

‘Frequencies saves lives’

→ EC Taskforce with goal to include defence

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User requirement high speed data

Matrix with all requirements + characteristics

Based on studies from Germany, France, UK, Finland, Belgium, ETSI + Netherlands

Approved in Forerunner Group

On agenda RCEG end May in Budapest

Goal:

‘European set PublicSafety mobile highspeed user requirements’

To use in technology choice with ETSI + frequency discussion

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PublicSafety highspeed user requirements

Type of application + services	throughput p/s per session	use per month per user	Number of users	mobility (using while moving)	quality of experience (can there be a hiccup in the connection)	Availability/ start-up time	timeliness	continuous operational availability (mission critical level)
LOCATION DATA								
A(V)LS data to CCC	low	high	high	high	medium	ready	high	high
A(V)LS data return	medium	high	medium	high	medium	ready	high	high
MULTI MEDIA								
Video from/to CCC for following + intervention	high	low	medium	high	low	ready when vehicle is ready	medium	high
Video for fixed observation	medium (high on hdd)	high	low	low	low	low	medium	medium
Video on location (disaster or event area)	high	low	low	low	medium	Take along on ad hoc basis	medium	high; availability at Golden Hour essential
Video conferencing operations	medium	low	low	low	low	low	medium	low

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Type of application + services	throughput p/s per session	use per month per user	Number of users	mobility (using while moving)	quality of experience (can there be a hiccup in the connection)	Availability/ start-up time	timeliness	continuous operational availability (mission critical level)
Photo broadcast	medium	low	medium	high	low	ready	low	medium
Photo to select group	medium	low	low	high	low	ready	low	medium
OFFICE APPLICATIONS								
PDA PIMsync	medium	high	low	high	low	ready	low	low
Mobile workspace + (incl public internet)	medium	medium	low	high	low	ready	low	low
DOWNLOAD OPERATIONAL INFORMATION								
Incident information download (text + images) from CCC to fieldunits + Netcentric working	medium	low	medium	low	high	ready	medium	high

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Is hybride solution the future?

Intelligent networks, terminals + applications

. Mission critical voice (group) communication: TETRA
. Mission critical mobile data:
    short/medium term: WB wide area (Tetra2-TEDS)
    longterm: own Broadband in PPDR band? (LTE based?)
. Non-mission critical mobile data: public networks (UMTS, LTE?)
. Data on event, PD, disaster: own hotspot? (WiFi? WiMax? LTE in own frequencies?)

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Questions?

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