

IFE Meeting 2003, Indianapolis

Common Communication
System for Fire and Ambulance
Services and Police in Germany

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IFE International Conference

- USA Branch of the Institution of Fire Engineers (IFE)
- 4th annual meeting of IFE
- Topic: Command, Control and Communications
- *Thanks to Bill Kehoe*
- *“Best wishes from the German Fire Service”*

Fire Brigades in Germany

- 99 Fire Departments (full time)
- 900 Fire Brigades in plants (private)
- 25,000 Volunteer Fire Brigades

- 26,000 TOTAL

- 16,300 Youth Fire Brigades

Fire Fighters in Germany

- 40,000 full time fire fighters:
 - 26,700 in cities
 - 7,300 in plants
 - 6,000 in Volunteer Fire Brigades
- 1,100,000 Volunteer Fire Fighters
- 245,000 Youth Fire Fighters

Service Demand Levels

- Aim of German Fire Brigades:
10 fire fighters within 8 minutes
+ 6 fire fighters within 14 minutes
in 95 % of regular fire alarms
- Ambulances (BLS) / EMS: 6 minutes
- Ambulances with a Doctor: 12 minutes
- In reality, we occasionally have different results

Runs in Germany per Year

- 200,000 Fires
- 650,000 Service Calls / Special Service
- 2,400,000 Ambulances (EMS)
- 200,000 False Alarms (Fire & EMS)

- 3,450,000 TOTAL

Police – EMS – Fire Service

- Police = State Level
16 States
1,200 Police Departments
- EMS-Service = District & City Level
323 Districts / Counties + 117 Cities
- Fire Service = Town Level
117 Cities + 14,300 Towns
25,000 Fire Departments & Fire Brigades

“112” all over Europe

- Different Numbers for Police, EMS und Fire Service: 09, 112, 122, 114, 110, ...
- European Parliament
- Decision 1991 + 1998
- “112” = Emergency Call in all European Countries
- Problem: 12 Languages!
- www.sos112.info

Fire Service = 112

- Fire
- Special Service – technical assistance
- EMS (350 Fire Departments)

Police = 110

- Beside the “112” we keep the “110”
- Crime
- Rubbery
- Complaints (e.g. neighbors)
- Advices, information

Urgent Services = 114 ?

- Discussion to start with a third telefon number: 114 ?
- Problems with gas, electrical power, water
- Credit cards
- Lost keys

City of Berlin

- Area: 890 km² = 340 sq.M (~ N.Y.C.)
- Population: 3.4 million
- 1.8 million flats
- 75 hospitals
- 170 subway stations
- 30 ... 55 deaths per year by fire / smoke

Dispatch Centers in Berlin (Control Room)

- 112 = Fire Service + Ambulances (EMS)
- 110 = Police

- Calls per Year:
 - Berlin Fire Department: 1 million
 - Berlin Police: 10 million

Berlin Fire Department: Fire Stations

- 78 Fire Stations (total)
including 37 fulltime fire stations
- 62 Volunteer Fire Brigades
- 43 Youth Volunteer Brigades
- 6 Fire Brigades in plants (private)

Berlin Fire Department: Personnel

- 3,580 full time fire fighters
- 200 fire fighters on instruction
- 400 civil personnel
- 4,180 TOTAL
 - 600 fire fighters on duty daily
- 1,500 Volunteers (90 Women)
- 900 Youth Volunteers (60 Girls)

Berlin Fire Department: Runs 1992 - 2002

- 13,800 > 7,400 Fires
- 37,000 > 20,000 Service Calls
- 196,400 < 207,000 Ambulances (EMS)
- 51,800 > 38,600 False Alarms, incl.EMS

- 299,000 > 273,000 TOTAL

Berlin Dispatch Center (1)

- New Dispatch Center since 2000 after 10 years of planning
- Costs: 40 million €
- New building, new computers, new dispatch system with 45 control boards
- Second Dispatch Center in a separate building with another 30 control boards
- 3 local Dispatch Centers

Berlin Dispatch Center (2)

- Staff: 115 Fire Fighters and Fire Officers
- Shift: 21 / 18 (day / night)
- Starting: quality management (from U.S.A.)
- Most Fire Fighters prefer the duty in the Fire Stations
- Start with civil employees?

Berlin Dispatch Center (3)

- Additional duties ??
- Coordination of private ambulance services
- New Service Number “114”
- Control more than the Berlin Aria?
- Problem: Don't get to large!

Communications (1)

- In Germany, all vehicles of Fire, EMS and Police use the same radios (4 m)
- Every radio can operate on 230 channels (full duplex)
- Most portable radios can operate on 10 channels only (simplex)

Communications (2)

- Actual: separate communication systems
- Police, EMS, Fire Service, Disaster Control
- Analog system, 30 years old
- Future: **one digital** system
- Actual discussions how to find the budget for at least 4.5 billion €

Communications (3)

- *Actual:* 2 communication levels:
4 m between control room and vehicles
2 m on scene with portable radios
- Problem: no direct control by control room (e.g. alerts)
- *Future:* 1 communication level
all radios operate on digital channel groups

Communications (4)

- Command system:
- If more than one service is involved, all actions have to be coordinated by mixed staffs
- Command Cars
- Command Bus
- Command Rooms

Dispatch Centers in Germany

- Police: 1.200
“110”
- EMS Service: 300
“19 222”
- EMS Service and Fire Service: 150
“112” and “19 222”
- Fire Service: 300
“112”

Experiences from 9-11

- Big cities might be targets for terrorists
- Big cities and regions have to network and support each other
- How to manage 1,000 - 5,000 - 10,000 injuries?
- Communication Systems have to be organized on independent levels & technical / logical systems

Changes on Dispatch Centers

- Better coordination necessary
(cross-border + cross-organization)
- No shift with 1 Dispatcher only at night
- High costs for new technical equipment
- GPS available
- Digitalized maps available

- Result: Number must be reduced!

Vision of Dispatch Centers

- Police “110”:
200 Dispatch Centers
instead of 1.200 (minus 1,000 !)
- Integrated EMS and Fire Service “112”:
100 Dispatch Centers
instead of 150 + 300 for EMS only
+ 300 for Fire Service only (minus 750 !)

Stay in touch!

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- Thank You!