EMERGENCY COMMUNICATIONS REFORMS IN ROMANIA

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Head of the 112 System

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BASIC INFORMATION

19.53 Million
238,397 km²

GEO 34/2008
regarding the organization and functioning of the Single national emergency call system

Government Decision 682/2009
concerning the National Coordination Committee of the functioning of the Emergency Call System 112

Decision 1023/2008
of the president ANCOM
112 MODEL
(MODEL 3)

ONLY ONE emergency number **112**

**Stage 1 PSAP** - operated by STS
- receives all emergency calls
- gathers info about the incident, location, victims and caller
- classifies the incident
- transfers the caller and gathered data to all appropriate Stage 2 PSAPs

**Stage 2 PSAPs** - same software platform
- receives calls transferred from Stage1 PSAP
- receives all data collected by Stage1 PSAP
- gathers specific info about the incident and victims
- assigns the most appropriate resources
CURRENT OVERVIEW

41 interconnected CADs

1 Stage1 PSAP per county
4 Stage2 PSAPs per county (Police, Gendarmerie, Ambulance, Firebrigade-SMURD)
11 Stage2 PSAP for other agencies
2 Training Centers
2 back-up callcenters for disaster scenarios

SERVERS

VOICE DATABASE APPLICATION
GIS DC PABX

112 Emergency System
SYSTEM COMPONENTS

- 41 interconnected CAD systems
- Centralized LIS
- Centralized ANI
- Same 112 software and GIS
- Centralized AVLS
- Multilingual service
SYSTEM COMPONENTS

113
Accessibility for persons with disabilities

Mobile App Apel112

eCall Platform

Geolocation

AML

VoWi-Fi
112 IN FIGURES

2019 vs 2020

<table>
<thead>
<tr>
<th>Non-emergency</th>
<th>Real Calls</th>
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<tbody>
<tr>
<td>2019</td>
<td>543308</td>
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<tr>
<td>2020</td>
<td>4430969</td>
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CALL DISTRIBUTION PER AGENCY

- Police: 65,05%
- Ambulance: 28,22%
- FireBrigade/SMURD: 23,72%
- Gendarmerie: 5,03%
- Other Agencies: 0,73%

Total Calls 10,234,595

Non emergencies drop 18,47%

Overall drop 9,44%
HW&SW MODERNIZATION PROJECT OF THE 112 SYSTEM

Objectives

- HW&SW UPGRADE
- HIGHER INTEROPERABILITY
- CALLS&DATA FROM HETEROGENEOUS ENVIRONMENTS
- SMART CALL ROUTING AND ESCALATION
- IMPROVE LOCATION
- EXTENDED ACCESSIBILITY
- ENRICHED CASE INFORMATION
- REAL TIME PERFORMANCE REPORTING
- INCREASE EFFICIENCY
- REDUCE EMERGENCY MANAGEMENT TIME
HW&SW MODERNIZATION PROJECT OF THE 112 SYSTEM

Bucharest

Sibiu

Brasov

VOICE BACKUP SYSTEM

VOICE BACKUP SYSTEM

41x
HW&SW MODERNIZATION PROJECT OF THE 112 SYSTEM

MAJOR COMPONENTS

- CAD
- LIS
- GIS
- ARLS
- VOICE BACKUP
- Dedicated interfaces
- Power Supply and AC Systems
- Dedicated Network components
- TETRA communication integration
- PEMEA

Logging monitoring auditing
Backup and security archiving
HW&SW MODERNIZATION PROJECT OF THE 112 SYSTEM

✓ TO IMPLEMENT NEXT GENERATION 112

✓ CALL OVERFLOW

✓ INTELLIGENT CALL ROUTING ON MULTIPLE LEVELS

✓ SMART IVR

✓ IMPROVED DYNAMIC INTERVIEW GUIDE

✓ ZERO INSTALLATION CLIENTS- USE OF TABLETS

✓ VDI

✓ SWITCH FROM ISDN TO SIP

✓ MISSION CRITICAL HARDWARE SOLUTIONS

✓ VIRTUALIZED ENVIRONMENT

✓ HARDWARE AND SOFTWARE INDEPENDENT

✓ STANDARDIZED INTEGRATION VIA ESB

✓ BUSINESS INTELLIGENCE SOLUTIONS
REFORM OF EMERGENCY COMMUNICATIONS IN ROMANIA

AML DEPLOYMENT

Official launch: 1st of April 2020

AML for
38.98% of all mobile calls
54.71% of real emergencies
20.42% of non-emergencies

Other handset derived location solutions
HTML5 Geolocation
Mobile app Apel 112
WhatsApp share location

Dedicated centralized infrastructure
Geo-redundancy and High Availability
SMS and HTTPS

Time of arrival <15 sec for 80% SMS and 92% HTTPS
Accuracy <50m for ~ 80% messages

Future plans
>AML in roaming
>enhanced network location

calls to 112 and SMS to 113
No roaming support, yet
REFORM OF EMERGENCY COMMUNICATIONS IN ROMANIA

**eCall**

- Implementation in the existing 112 system since 2011.
- eCall model is centralized/georedundant - all eCalls are routed based on eCall flag to Bucharest PSAP or to the backup PSAP located in Brasov.
- The emergencies are transferred to the county emergency agencies that are responsible in the incident area.

**TPSP** - custom interface based on CAP v1.2 protocol
REFORM OF EMERGENCY COMMUNICATIONS IN ROMANIA

PUBLIC WARNING SYSTEM

Cell Broadcast

extreme weather events
threatening floods
terrorist attacks
REFORM OF EMERGENCY COMMUNICATIONS IN ROMANIA

TRANSNATIONAL EMERGENCY CALLS

2 long numbers for Bucharest
PSAP and one for a backup
callcenter in Bacau

FUTURE PLANS
Solution for PSAP calling from abroad, without costs for the caller

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Optional Registration
Improve Apel 112 to fit the PEMEA environment
Foreign language
User medical profile
Use pictograms to communicate
Total Conversation
PROMOTING 112

Raising awareness on the right way to use the emergency number

Number of false calls and abusive callers

Significant changes within the legal framework

Promoting the use of APEL 112 mobile app
REFORM OF EMERGENCY COMMUNICATIONS IN ROMANIA

PROMOTING 112

112 CALL TAKER SUCCES STORIES

CHILDREN EDUCATION CAMPAIGNS

OPEN-GATES DAYS

ENHANCED MOBILE LOCATION SUCCESS STORIES
OTHER PLANNED REFORMS/PROJECTS

FUTURE PLANS

- AML 2.0
- Enhanced Cell-Id
- Enhanced location
- AI Speech-to-Text
- DRONES
- PSAP calling from abroad
Thank you for your attention!