



CAP-based Alerting System via Commercial Radio

Dipartimento Protezione Civile Regione Sicilia (DPRCS)
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IES Solutions
Rome, Catania, Oxford

DPRCSICILIA AND IES

- Ⓜ Working together since 2009
- Ⓜ Innovative solutions for the “fire seasons” in 2010 an 2011
- Ⓜ Since 2014: Design and Deployment of the GECoS platform



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- Ⓜ G.E.Co.S (Gestione Emergenze e Comunicazione Sicilia)
- Ⓜ Name and logo inspired to Gecko, a small (and cool) reptile very common in Sicily
- Ⓜ It is a Web 2.0, CAP, EDXL-DE & RM compliant Command and Control Room, focused on the needs of a Regional Civil Protection Authority
- Ⓜ Part of a larger project, led by TELECOM ITALIA, that is providing IT tools, smartphones, networking and hosting/cloud facilities for the Regional Civil Protection



THE OBJECTIVES

- ④ GECoS provides all actors of Civil Protection the tools to:
 - ④ **Manage** the four phases of emergencies
 - ④ (Prevention, Preparedness, Response and Recovery)
 - ④ **Provide** communication, data exchange and standard based interoperability
 - ④ **Offer** a Common Operational Picture of Events, Resources, Structures, emergency plans as well as tools for assessing early situational awareness and to follow events evolution
- ④ A unique, virtual, shared, cloud based Command and Control room



THE ACTORS

- ④ The Regional Civil Protection
- ④ Provincial and local headquarters
- ④ 9 Provinces and Prefectures
- ④ 390 Municipalities
- ④ 600+ Volunteers Organizations
- ④ Highways and road authorities
- ④ Electricity and GAS companies
- ④ National Civil Protection
- ④ Third parties, such as Fire Fighters, Police, Ambulances etc.



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THE SOLUTION

- Ⓜ A Web 2.0, SOA oriented architecture
- Ⓜ Based on open source software (Java, PHP, MySQL, PostGIS)
- Ⓜ Based on open standards (CAP, EDXL-RM, EDXL-DE)
- Ⓜ Based on common geography (WMS/WFS services, OpenStreetMap)
- Ⓜ Focused on interoperability amongst all the actors by the use of ATOM feeds
- Ⓜ A custom version of the JIXEL-REGIO solution (<http://jixel.eu>)



THE DIRECTIONS OF COMMUNICATION

- ④ The EU Project ESENET worked around the main direction of communication:
 - ④ C2A – Citizens to Authorities
 - ④ A2A – Authorities to Authorities
 - ④ A2C – Authorities to Citizens



WHAT WE DO WITH GECoS

@C2A:

- @ Get notification from citizens on the field thanks to the Anch'ioSegnalo APP

@A2A:

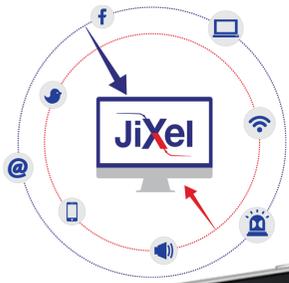
- @ Manage all Events
- @ Dispatch Alerts to member of the Civil Protection System (Municipalities etc.)

@A2C:

- @ APP notification
- @ For the first time in Europe use Commercial Radio to broadcast messages to
CITIZENS



C2A: JIXEL AGGREGATOR



APP – Direct messaging



CAP feeds



Social MEDIA

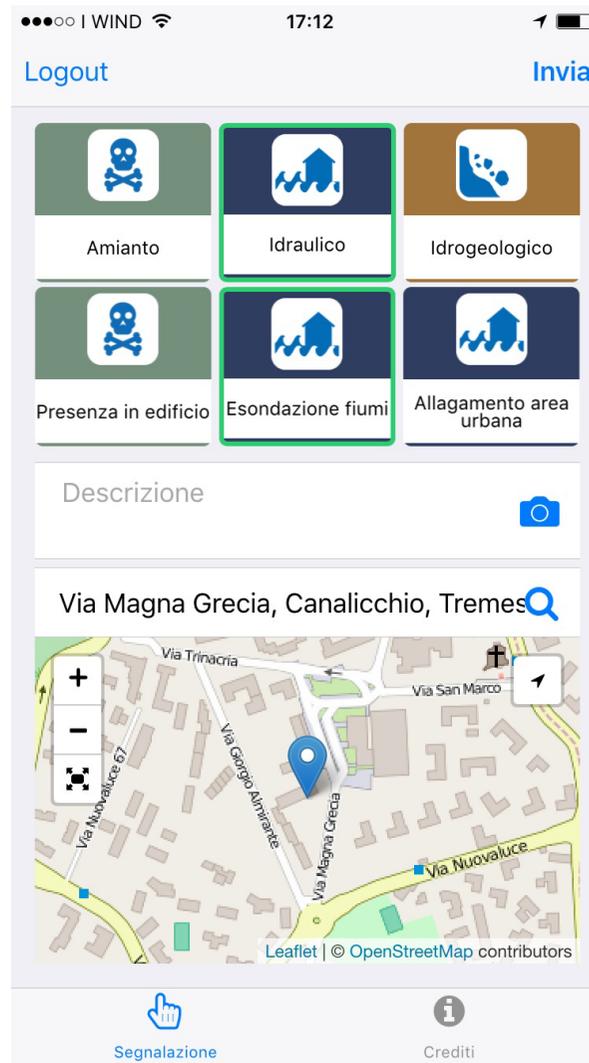


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- ▶ Getting an Alert from citizens
- ▶ The ALERTS are CAP Messages!



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Filtri



Lista di 155 su 2337 di altri Eventi



Creati

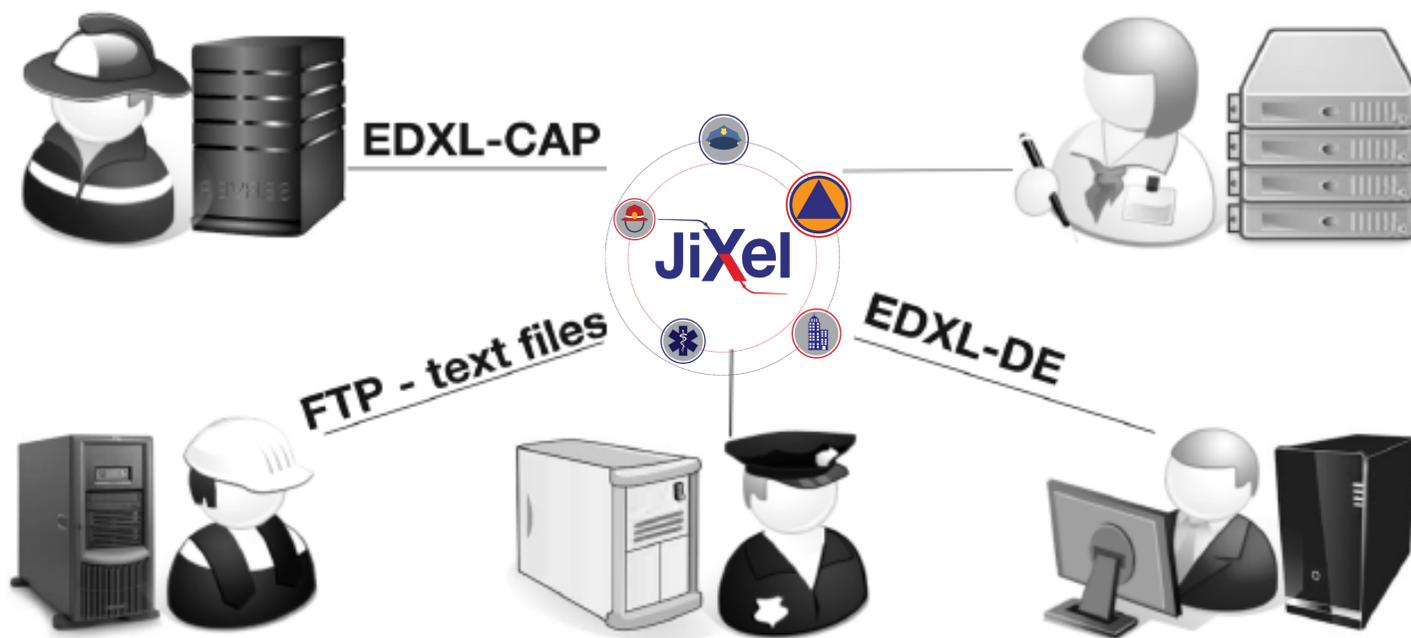
Ricevuti

Altri



Id	Stato Evento	Ultima modifica	Tipo Evento	Oggetto	Istruzioni	Luogo	Organizzazione proprietaria	Modificato da	Azioni
3263	Sotto Controllo/Bonifica	04/09/17 16:39 (52 minute ago)	Incendio	incendio scarpata A 19 PA/CT Km 7.5, 7.6	Il rag. Messina attiva l'OdV cod.073 Altavilla milicia /1 mezzo+3 unità); sul posto,anche una squadra ANAS chiama il sign. Damiani dell'odv. cod. 073 comunicando che l'incendio è stato spento.	bagheria	SORIS OPERATORI, Giovanna Amato	SORIS OPERATORI, Piergiorgio Martorana	Gestisci
3264	Segnalazione	04/09/17 16:32 (58 minute ago)	Incendio	Incendio sterpaglie c.da Fiocco	Chiama il Comandante dei VV.UU comunica che ha attivato l' OdV cod 1305 (3 unità +1 mezzo)per un incendio di sterpaglie in c.da Seotto Comune di San giuseppe Jato. Sul posto, anche, i CC.	san Giuseppe Jato	SORIS OPERATORI, Giovanna Amato	SORIS OPERATORI, Giovanna Amato	Gestisci
3260	In Gestione/Intervento	04/09/17 15:06 (2 hour, 24 minute ago)	Incendio - Boschivo	Mistretta (ME)	Sindao Mistretta (ME) comunica che l'incendio ora insiste in zona impervia, viene monitorato da CFRS e O.d.V. cod. 1107.	mistretta	SORIS OPERATORI, Giacomo Anselmo	SORIS OPERATORI, Marcello Barone	Gestisci

A2A: JIXEL SHARE



DISPATCH ALERTS TO OTHER AUTHORITIES

Gestione Evento - Organizzazione proprietaria: **SORIS OPERATORI**

Storico Evento

Gestione volontari



Generali

Dettagli

Località

Destinatari

OdV Attivate

Allerta Pubblico

Missioni

Allegati

Anch'ioSegnalo

CAP

Destinatari:

CAP

Organizzazioni

ASSOCIAZIONE VOLONTARI NUCLEO OPERATIVO VALLE JATO
DRPC Sicilia - Dirigente Generale
DRPC Sicilia - Servizio Pianificazione e Gestione dell'Emergenza
DRPC Sicilia - Servizio Rischi Ambientali ed Antropici
DRPC Sicilia - Servizio Volontariato - Formazione - Comunicazione
DRPC Sicilia - Social DRPC Sicilia - Unità di Staff
SAN GIUSEPPE JATO

Gruppi di organizzazioni

INCENDI PA SORIS

CAP



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C2A: JIXEL ALERTER



Web e Banner

Social Media

Email

SMS

Phone

APP

Radio



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EU COMMISSION IMCO DECISION SEPT 4TH 2017

- Ⓢ 04 September 2017 marks an important date for the history of 112. The European Parliament's Committee on the Internal Market and Consumer Protection (IMCO) voted an important piece of legislation, marking the first step towards a better functioning 112 service in Europe.

Highlights of the vote:

- Ⓢ Handset-based location: Use of the data from the handsets to improve considerably the caller location information provided to the emergency services.
- Ⓢ Public warning: Use of the telephone networks to send alerts to the population, facilitating the introduction of a modern Reverse-112 system.
- Ⓢ Transnational database: Establishment of a transnational database that includes emergency services' long numbers in order to foster transnational cooperation.
- Ⓢ Direct access: Access to 112 including from private networks.
- Ⓢ Accessibility: Better means for people with disabilities to reach the emergency services.



AUTHORITIES TO CITIZENS

- Ⓜ JUST APPROVED Amendment Article 102a
- Ⓜ Reverse “112” system. Member States shall ensure, through the use of electronic communications networks and services, the establishment of national efficient ‘Reverse-112’ communication system for warning and alerting citizens, in case of imminent or developing natural and/or man-made major emergencies and disasters, taking into account existing national and regional systems and without hindering privacy and data protection rules.



RADIO INSTALLATION

- Installation at RADIO SMILE, CATANIA
- It goes on the AUDIO chain without altering the quality of the radio broadcast

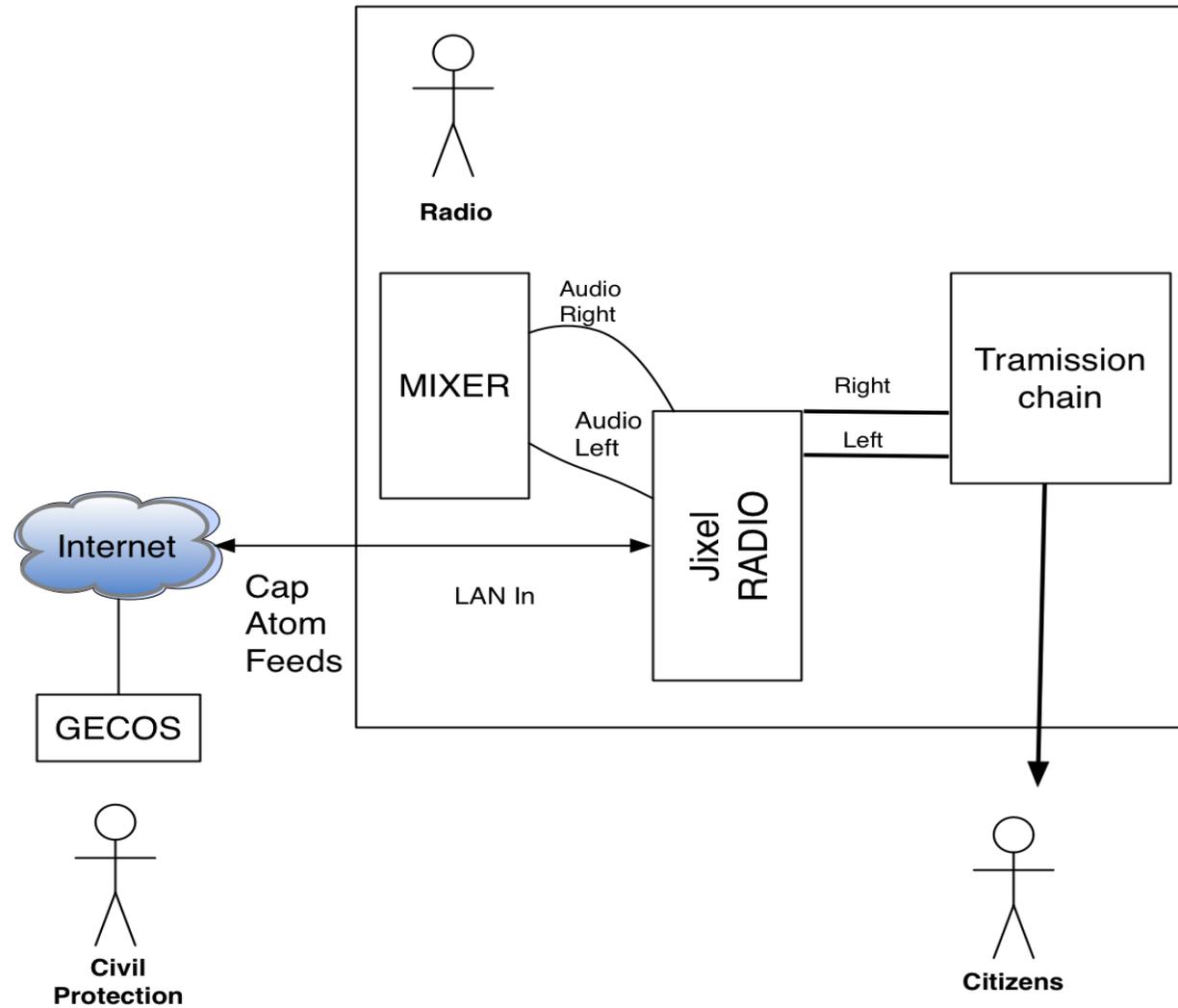


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HOW IT WORKS



RADIO BROADCAST

Prepare and
send a CAP
alert message
with ALERTER



JIXEL-RADIO
converts the CAP
message in a
spoken message
and broadcasts it

All standard radio
devices become
alerting tools and
play the message



Jixel

The logo features the word "Jixel" in a bold, dark blue, sans-serif font. A prominent red diagonal slash cuts through the center of the letter 'x'. A dark blue line starts from the top left, curves down to touch the top of the 'x', and then continues as a thin line to the right. A red line starts from the bottom of the red slash, curves down to touch the bottom of the 'x', and then continues as a thin line to the right.

- ☉ GECOS is autonomous and may run also without Internet connectivity (all services, including geography, are self-contained)
- ☉ Messages are shared as Atom Feeds of CAP Alerts, personalized for each target organizations
- ☉ Resources are shared as Feeds of EDXL-RM messages
- ☉ Alerts and resources may be embedded in EDXL-DE envelops
- ☉ GECOS is the first “important” uptake of CAP protocol at Regional level for a Civil Protection authority in Italy
- ☉ The RADIO installation is the first installation of this type in EUROPE. Great interest by many Radio networks in getting these tools.



THANK YOU

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