



Nemergent
Solutions

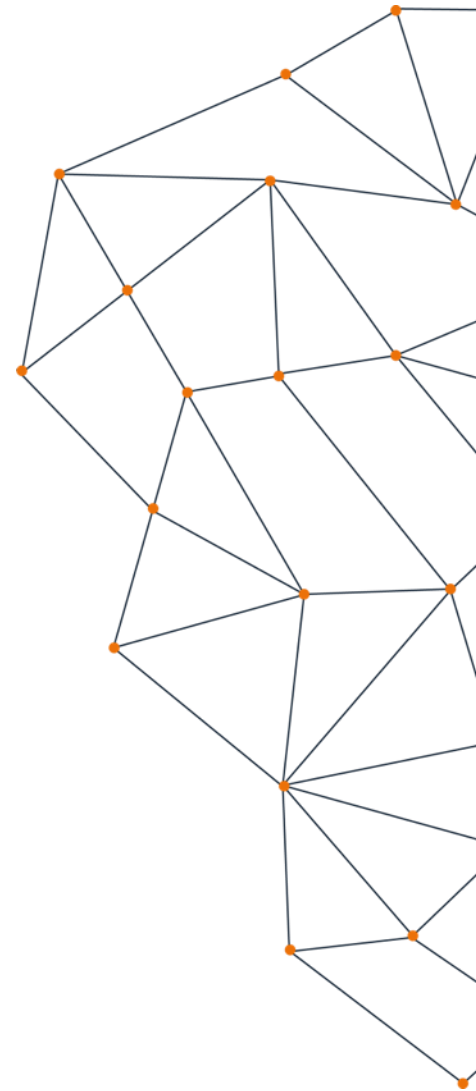


Nemergent Solutions SL **3GPP MCPTT experts.**

PSC Europe
Public Safety Communication Europe

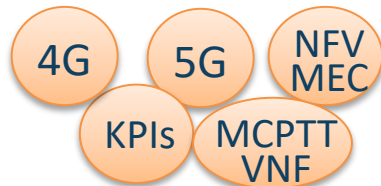
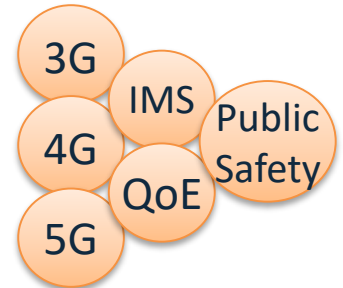
Madrid, 28th November 2017

- Past / Present
 - Who we are
 - What we do
 - Some references
- Future
 - What we want to be
 - What we want to do
- Small scale demo



Who we are.

- Start-up from University of the Basque Country (UPV/EHU)
 - >5 years experience in PS LTE
- Quick facts
 - Located in Bilbao, Basque Country, Spain
 - 8 people involved
 - Collaboration with UPV/EHU R&D unit
- Focus on 3GPP Mission Critical solutions
 - Mission Critical PTT (MCPTT) and evolutions
- 5G ready NFV-based MCPTT



<https://www.nemergent.com/traces.html>

<https://www.nemergent.com/repository.html>

<https://nemergent-solutions.com/products-services/>



3GPP R13 MCPTT

3GPP R14

3GPP R15

2014

2015

2016

2017

2018

Pre-MCPTT PS LTE

PCPS

MCPTT

eMCPTT

N-MCData MCVideo

4G/IMS
TETRA



eman ta zabal zazu



UPV EHU

Nemergent / Initiative

MCPTT v13.3 traces
Wireshark dissector

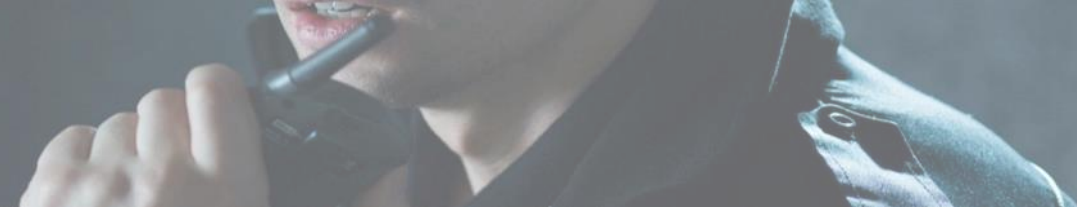


PS community:
"PS LTE solutions not ready"
"We need standards"

PS community
involved in 3GPP

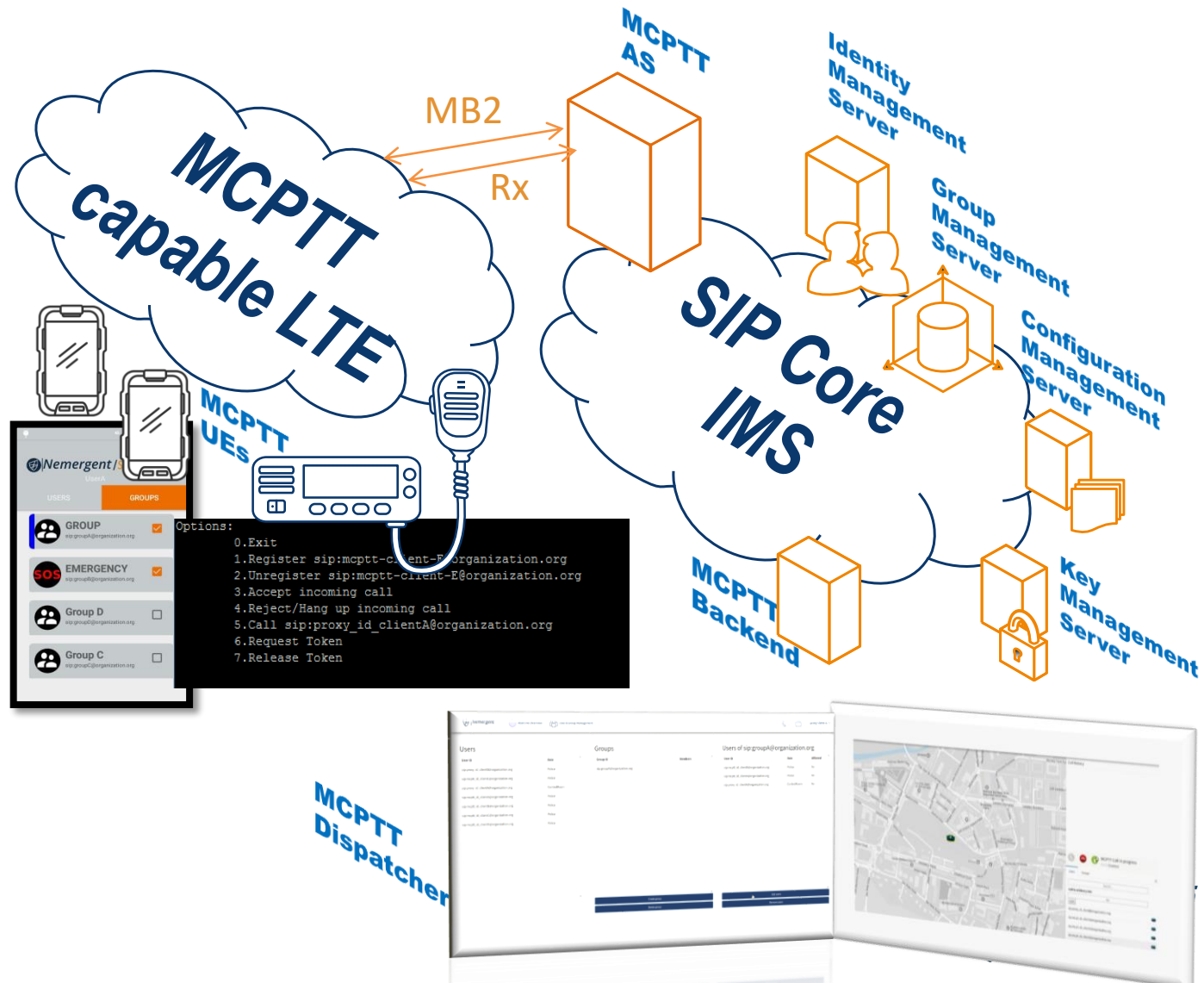
Now we have MCPTT...
back to private PS LTE?

What we do.



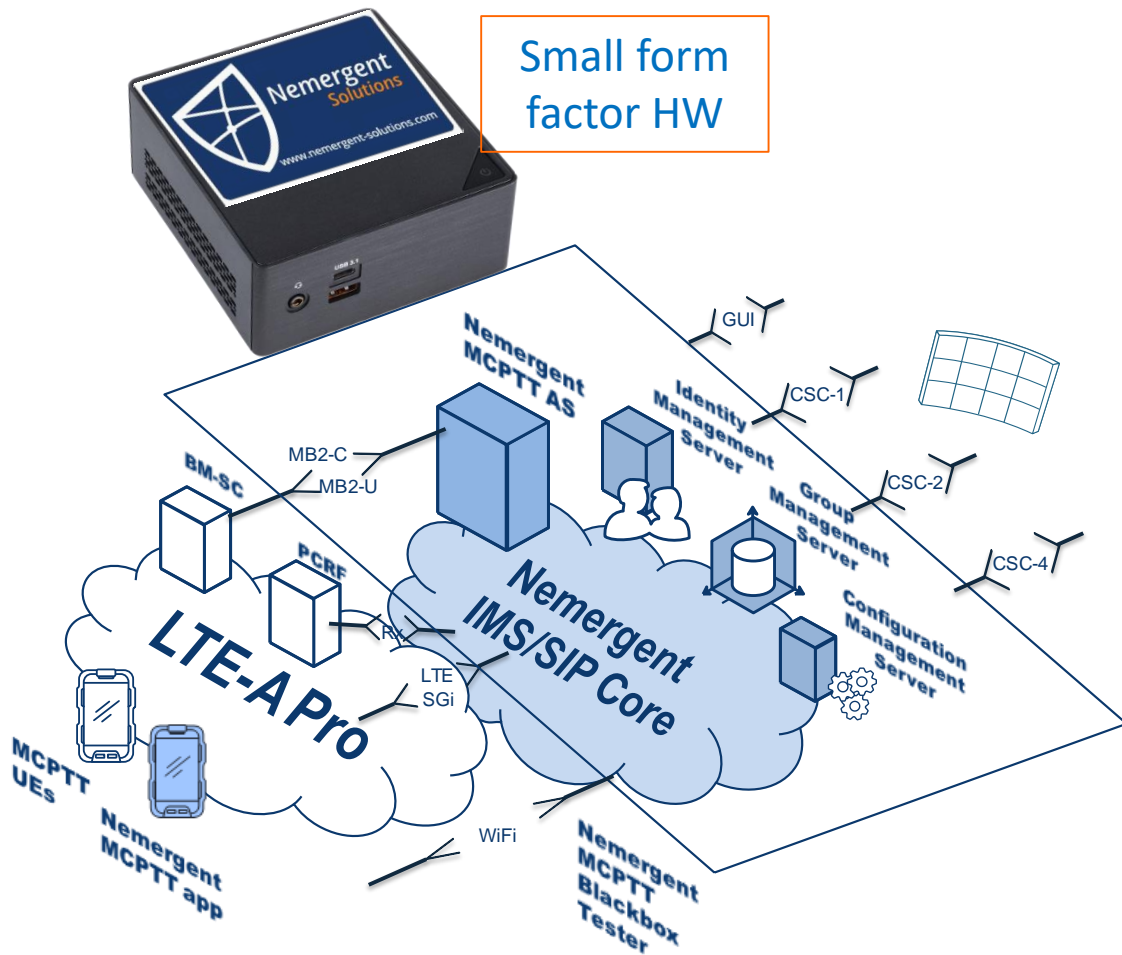
Work on MCPTT needs.

- Application-level SW.
- Integration with SIP/IMS cores.
- Integration with LTE-A Pro networks.
- Integration with PS devices.
- Provisioning
- Demos / pilots.
- Public / private deployments.

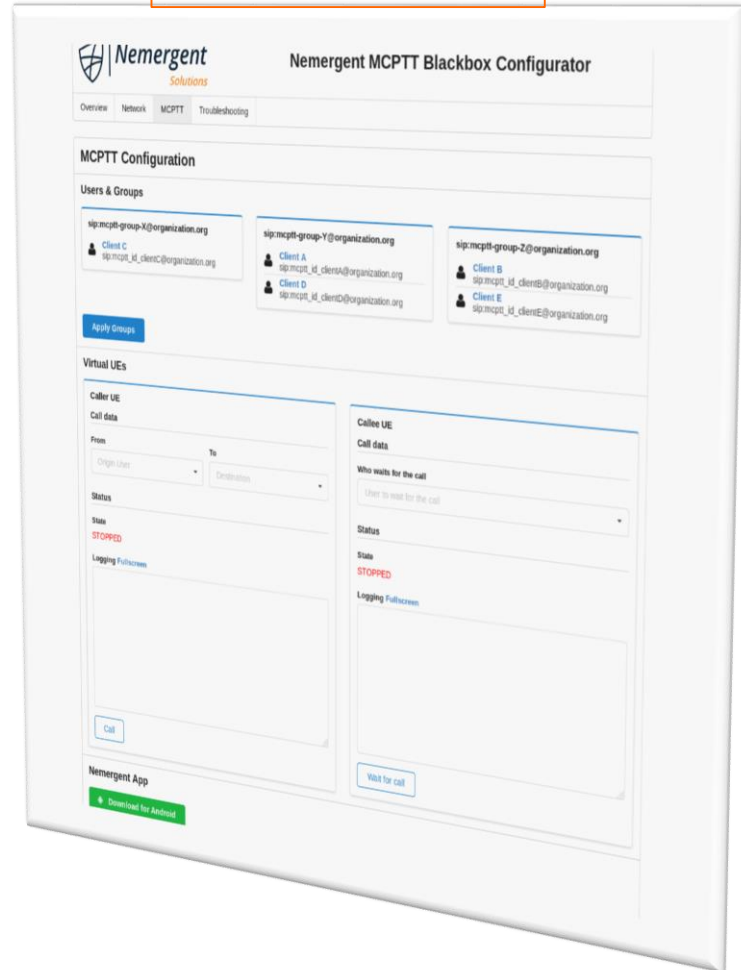


- Your experimentation partner.
- Your MCPTT provider (flexible partnerships in RFIs / RFPs).
- SW licensing (different components).
- Nemergent MCPTT Blackbox Tester (3rd party MCPTT developments).


Tailored GUI



Small form factor HW



1st ETSI MCPTT Plugtest (June 2017)

Participants 

MCPTT AS:

- Airbus
- Alea
- Genaker
- Harris
- Hytera
- Nemergent**
- TASSTA
- ZTE

MCPTT Clients:

- Airbus
- Alea
- Armour
- Etelm (in TETRA BS)
- Frequentis (in Control Room)
- Funkwerk
- Genaker
- Harris
- Hytera
- Nemergent**
- Spirent
- TASSTA
- ZTE

User Equipment:

- Bittium
- Funkwerk

LTE Network (EPC, eNB, MBMS):

- Athonet
- Ericsson
- Expway
- Huawei
- One2many

IMS:

- Athonet



2nd ETSI MCPTT Plugtest (June 2018)

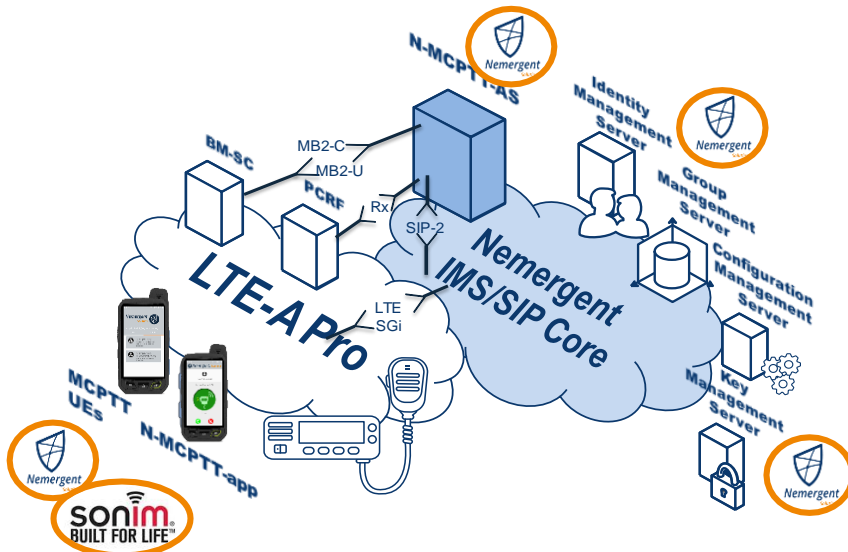
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End to End Mission Critical Push to Talk



Develop / evolve MCPTT server components.
Integrate MCPTT client library with SONIM
→ User Experience.
Field tests with PSOs
→ User / Service Experience.



Mission Critical Open Platform (MCOP)



Project target:

- Future open source Android MCPTT client.

Nemergent role:

- Deploy / maintain / upgrade MCPTT servers.

MCPTT integration over public / private LTE.



- Trial in Austria.**
- Public mobile network.
 - Private deployable system.

Multi-technology PTT system.



- APCO 2017.**
- Commercial PoC solutions.
 - Nemerget 3GPP MCPTT.

World first e2e eMBMS-capable MCPTT Integration.



- 3GPP R13 MCPTT.**
- MCPTT application level.
 - LTE-A Pro MCPTT QClS.
 - LTE-A Pro MCPTT eMBMS.

Proof of Concepts: Public Safety, Public Transport, energy...



(...)



Company value proposition.



MCPTT expertise.

- **Mature MCPTT ecosystem.**
- **Real standard mission-critical grade.**
- **Experience in heterogeneous deployments.**
- **Totally focused on 3GPP specs.**

Open / collaborative approach.

- **Partnerships with LTE vendors, UE vendors, system integrators...**
- **Flexible technology provider.**
- **Agile adaptations / tailoring.**
- **Open to new opportunities / vertical sectors.**

3GPP
MCPTT
MC-X

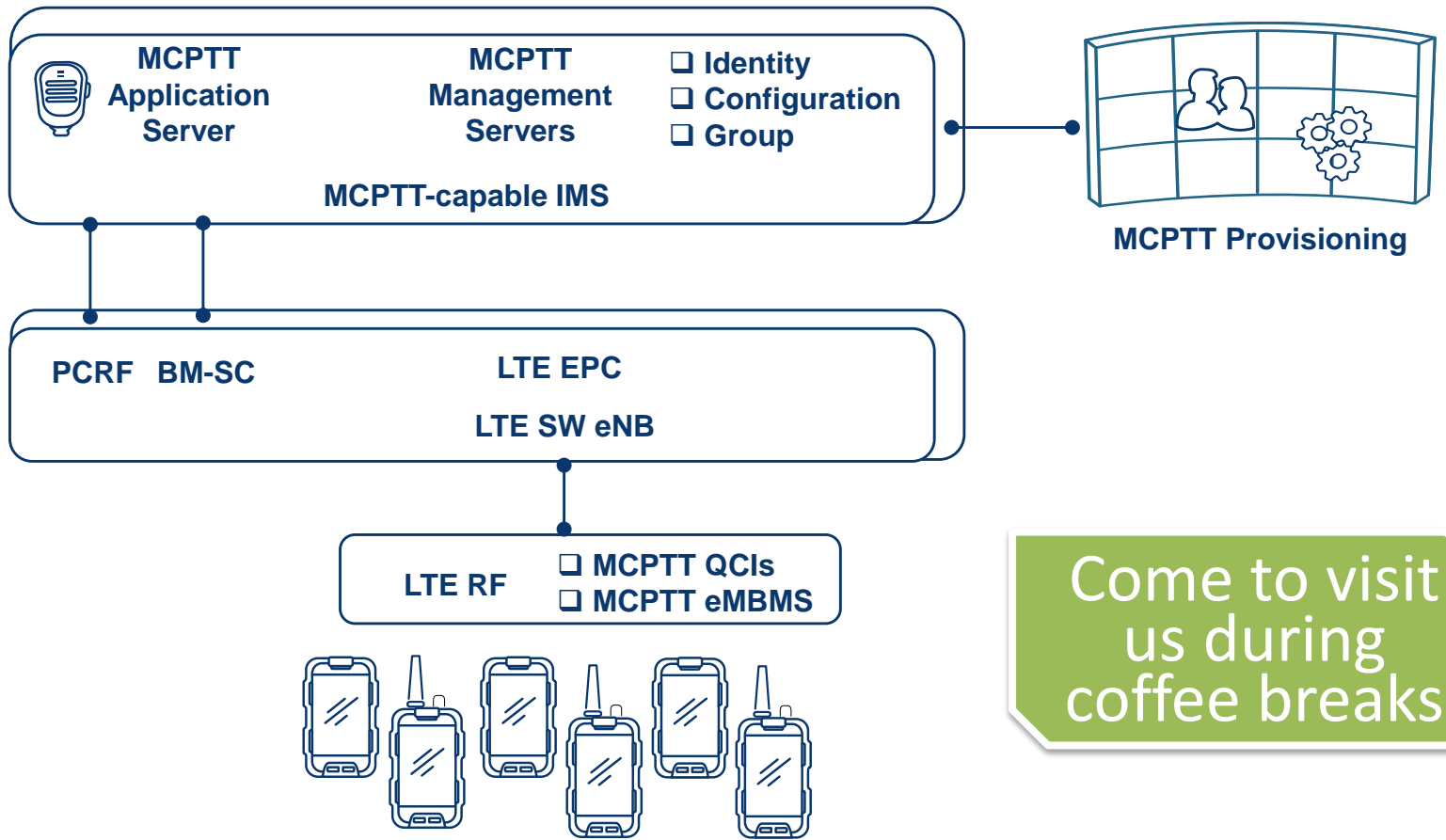
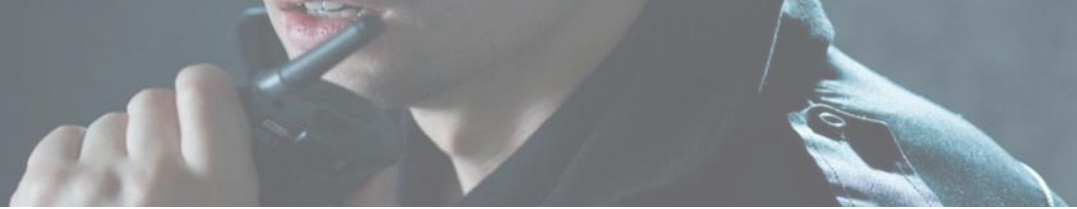
VS

Non 3GPP
PS LTE

Interoperability.
Open ecosystem.
QoS, multicasting...

Additional features.
Niche markets.
Private management.

Small scale demo.



Come to visit us during coffee breaks



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