

### Interoperability Testing

# VolTE Testing and Device Compatibility

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# GSMA Network Group



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## **Approved Testing Stipulations**

#### Test Methodology Defined

- Test networks & devices both in isolation and in combination
- Test non-roaming and roaming scenarios
- Definition of 6 standard service-based IMS configuration profiles
  - Services are voice (inc. video), SMS and emergency call with the profiles are designed to fully test IMS functionality on a device
- Definition of "Network-Types" reflecting their deployed IMS services with applicable test suites and an evolution path to the assumed common end goal of all services on IMS:
  - Type-0 LTE launched
  - Type-1 VoLTE launched
  - Type-2 VoLTE & SMSoIP launched (CS-emergency)
  - Type-3 VoLTE & IMS Emergency call (legacy SMS)
  - Type-4 All IMS based services
- Definition of a roaming test matrix covering all network type combinations and IMS profiles
- The GSMA Terminal Steering Group have endorsed the testing via TS.59

### **Three Test Types for MNO/MVNO**



#### Network Test

- Network examined via test equipment acting as a reference device
- Test uses the IMS configuration settings of the network



Network Roaming Test

- Testing of two S8HR VoLTE roaming networks via test equipment acting as a reference device in each network
- The test uses the respective IMS configuration settings of each network



#### MNO / MVNO & OEM

## Network & Device Test

- Real device tested against already tested network
- The network is an emulation of the real network based on message traces taken during the network only test
- The test uses the IMS configuration settings of the MNO network

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Testing performed by Mobileum who led the testing stream work in the GSMA NG

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### **Certificate issuance & promotion of results**



This is to certify that

Truphone Portugal

on 17 02 2022

has successfully demonstrated the capability laid out in GSMA PRD IR.25 and passed the Network Test to facilitate the deployment of VoLTE.

Identity of Network	Network-234/025			
The network was successfully p	roven to be a	Type 4	Network	
The network was tested using	a bespoke Service Profile			
Certificate Number:	2021-NT-5	825		
Supplementary Information: Visit <u>gema.com/volteresults</u> to view all tests passed.	Truphone are a MVNO and and partner RAN/MME/S-C Service Profile VoWiFi & S VoWiFi & SMS-2 and NG S partner network. A sponsor	I provides service via its own SW. The bespoke IMS profile MS-2 and is largely a combin Service Profile Voice-1. CS E red IMSI was used in Portuge	cloud based IMS/HSS/P-GW is most closely aligned to NG ation of NG Service Profile mergency call was tested in the I.	
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#### VoLTE Interoperability Test Results

Here is where you can see the companies that have passed the VoLTE Interoperability tests. So, these mobile network operators and device manufacturers are now independently verified. Meaning, they have demonstrated that VoLTE works smoothly on their network or device.

The results show the four different types of tests. You can search for a mobile operator or manufacturer in the search bar. Also, please use the arrows to group the listings alphabetically.

#### Search by operator or manufacturer a

Network Test Network Roaming Test

Device Test Network & Device Test

Network Operator	MCC/MNC	Network Type	IMS Profile	Date Test Completed	Certificate
Evolve Cellular	310 990	Type 4 - VoLTE, SMSoIP and IMS emergency	VoWiFi & SMS- 2	21/02/2022	2022-NT- 7345
Truphone Portugal	234 025	Type 4 - VoLTE, SMSoIP and IMS emergency	Bespoke	17/02/2022	2022-NT- 5825
Truphone HK	454 008	Type 4 - VoLTE, SMSoIP and IMS emergency	Bespoke	03/02/2022	2022-NT- 3029
Truphone Germany	262.042	Type 4 - VoLTE, SMSoIP and IMS emergency	Bespoke	05/01/2022	2022-NT- 4667
Truphone Netherlands	204 033	Type 4 - VoLTE, SMSoIP and IMS emergency	Bespoke	05/01/2022	2022-NT- 5185
Truphone USA	310 300	Type 4 - VoLTE, SMSoIP and IMS emergency	Bespoke	05/01/2022	2022-NT- 4379
Gibtelecom	266 001	Type 1 - VoLTE	Voice-2	15/10/2021	2021-NT-1627



Congratulations Evolve Cellular - the first North American operator to pass the GSMA Interoperability Testing #VoLTE network test.

...

They've demonstrated that their network runs VoLTE smoothly, and their customers will be celebrating too, as they can enjoy the best possible voice calling experience on the #EvolveCellular network.

Find out more here



The first North American MNO to pass VoLTE interoperability test

gsma.com • 2 min read



## Symbiotic Nature of IoP Testing and NSX

### **GSMA Network Settings Exchange** Interrelationship

The respective IMS configuration settings of each network required for undertaking the tests are in the GSMA Network Settings Exchange platform OEMs then pull the correct IMS settings from the platform

OEMs are encouraged via the notification to implement the settings Once tests are successfully completed, notifications are automatically pushed to all registered OEMs

MNO/MVNO	Interoperability Tested 🕖	Country	Upload Date
Gibtelecom		Gibraltar	15 Mar 2020
Truphone Limited		Portugal	02 May 2020



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GSMA strategy to solve device challenges

### **Pro-actively supporting MNOs/MVNOs**

### • **GSMA OEM outreach** to reinforce the spirit of TS.59

- Further OEM validation likely initially
- Some may accept message traces as validation
- Some OEMs perform QA testing on accredited networks
- Some OEMs lend a device for MNO to perform the validation
- Dialogue ongoing
- Network & Device Combination test aimed at MNOs/OEMs where a device is targeted at a particular network

