Altan Networks

APRIL 2023

VoLTE Evolution

AVISO DE CONFIDENCIALIDAD: Este documento fue preparado por ALTÁN y debe ser considerado como información confidencial de ALTÁN. Este documento es solo un material de apoyo de una presentación oral; por lo tanto, las conclusiones que se puedan inferir de este material pueden variar sin los comentarios del ponente. Esta presentación tiene únicamente fines informativos y no reemplaza el juicio profesional independiente. Este material no debe copiarse, reproducirse, publicarse, distribuirse, transmitirse o divulgarse (en su totalidad o en parte o de cualquier manera) a ningún tercero ni utilizarse para ningún propósito diferente de la presentación oral antes mencionada, a menos y hasta que ALTÁN otorgue su consentimiento por escrito. © 2018 - Altán Redes, S.A.P.I. de CV Todos los derechos reservados.

ALTÁN REDES

Altán La red de todos

Altan – Wholesale Network

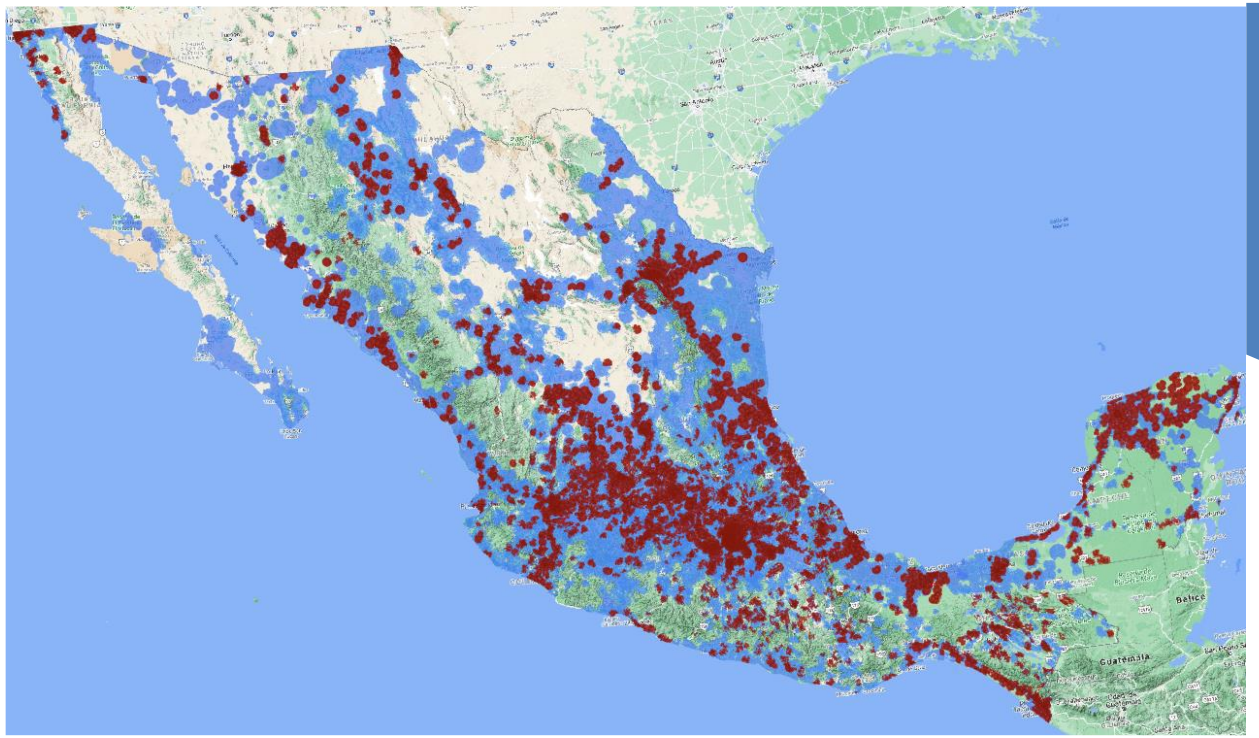
GSMA Member

The Wholesale Network is a unique project in Mexico, whose objective is to transform telecommunications in the country, close the digital way and promote competitiveness

¿Who is Altán?

- Mexican company responsible for deploying and operating the Network under the terms and conditions established in the **Public-Private Association (APP)**
- **Main Goal:** Connect 100% of Mexicans, reduce the digital way, promote competition and provide a neutral, non-discriminatory service.

Red Compartida has national coverage



Current deployment of own Population coverage **70.66%**

Altán + Partners 2023: **94.3%**

Cobertura Altan
Cobertura Roaming Nacional

Social Coverage

- Unique provider with 4G in more than 60K locations.
- Unique single provider in 30K locations.

- **8.4M** active end users currently.
- Presence in **87** Magic Towns.
- Coverage of more than **50% of the Social Coverage** Plan.
- More than **95,000 communities with fewer than 5,000 citizens** already have coverage.

How do we operate?

We convert the 700MHz spectrum into capacity, which is sold to virtual mobile operators for marketing to their end users

Public sector

Spectrum

Fibre

ALTÁN Wholesale Network

Customers
Virtual Operators (115 MVNOs)

End User

8.4Mill EU

Spectrum and infrastructure at the service of EVERYONE to improve the population's access to broadband

- **Next Generation 4.5LTE network that allows rapid evolution to 5G**
- **Speed up to 100Mbps per end user for a superior internet experience**
- **We support all the business models that an MVNO requires, from Full MVNO to resale models**

VoLTE Interoperability Testing

We are pleased to share that the capability set out in GSMA PRD IR.25 was successfully demonstrated and the GSMA.

VoLTE Interoperability Network Test passed.

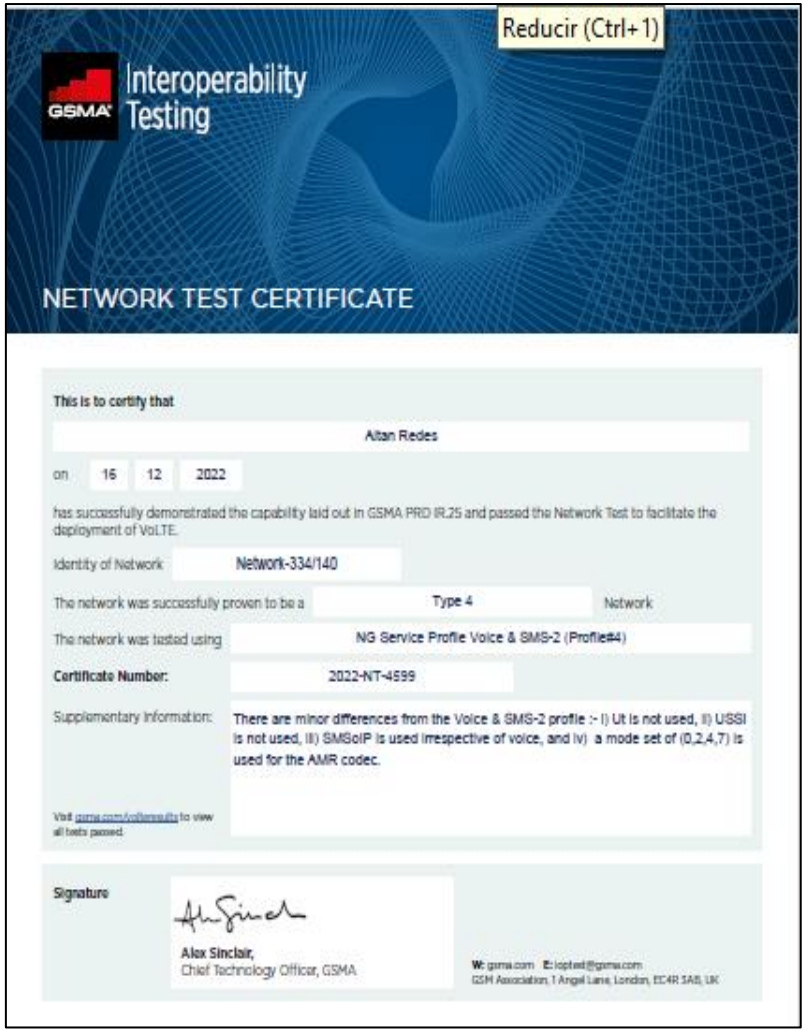
Definition of a test matrix covering all network type combinations and IMS profiles

- 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

Operador de red	MCC/MNC	Tipo de red	Perfil IMS	Fecha de finalización de la prueba	Certificado
Altan Redes	334 140	Tipo 4 - VoLTE, SMSoIP e IMS de emergencia	Voz y SMS-2	16/12/2022	2022-NT-4599

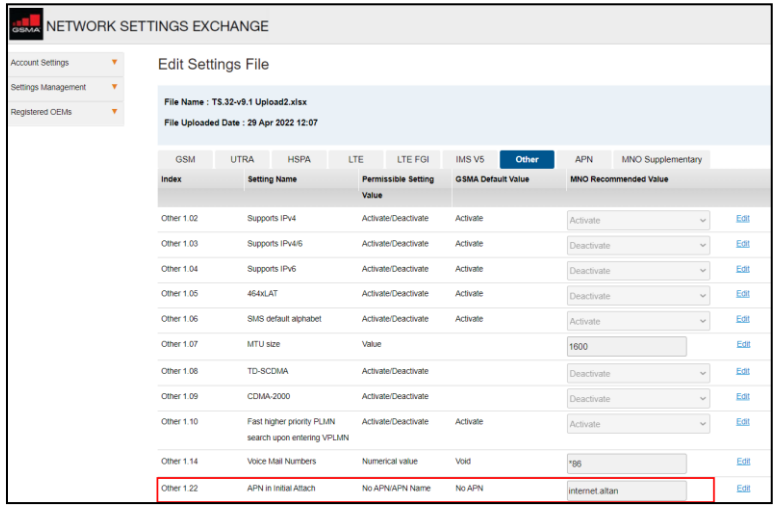
Test Overview: Test Success Details - 2022-12-15 20:00 to 2022-12-15 21:00 UTC+01:00

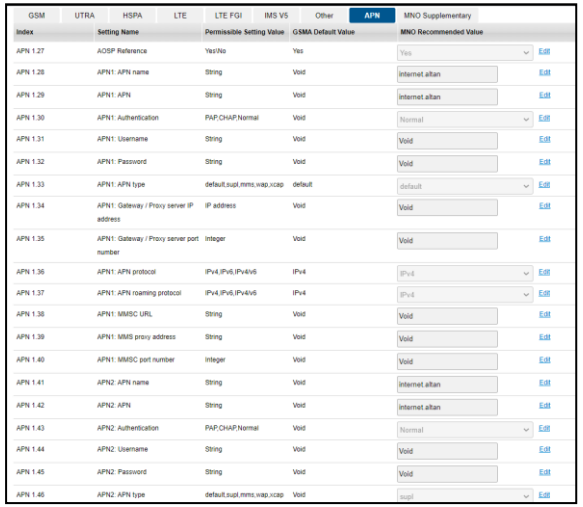
Testcase	Timestamp	Verdict	errorText	Cause_L3	a_UsedPMN	b_UsedPMN	c_UsedPMN	d_UsedPMN	a_imsi	a_number	a_location	b_imsi	b_number	b_location
IMS_Register	2022-12-15 20:41:57	PASS			mx altan				334140142680496	+525646585696	Mexico-Altan-CDMX			
VoLTE_MO_External	2022-12-15 20:42:29	PASS			mx altan				334140142680498	+525646580608	Mexico-Altan-Merida			
VoLTE_EmergencyCall	2022-12-15 20:46:18	PASS			mx altan				334140142680499	+525646587016	Mexico-Altan-Hermosillo			
SMSoIP_MO_MT	2022-12-15 20:46:43	PASS			mx altan	mx altan			334140142680498	+525646580608	Mexico-Altan-CDMX	334140142680496	+525646585696	Mexico-Altan-Tijuana
VoLTE_MO_MT	2022-12-15 20:50:16	PASS			mx altan	mx altan			334140142680499	+525646587016	Mexico-Altan-Hermosillo	334140142680497	+525646585707	Mexico-Altan-CDMX

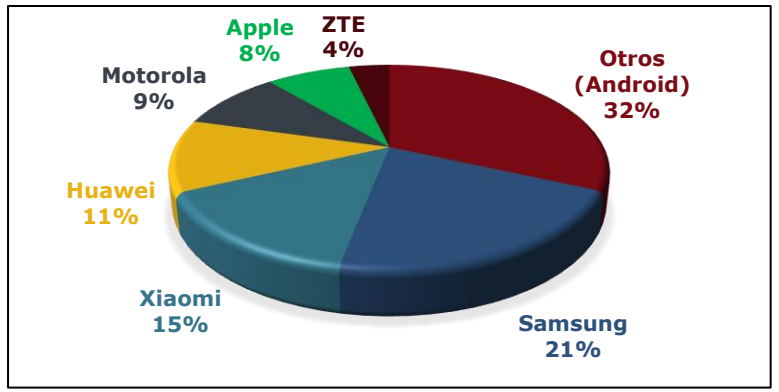


GSMA NSX experience

NSX was used to fix Automatic APN configuration in Apple devices







This service enabled 8% of our active fleet with automatic configuration

Scenario: Apple devices have no data service or internet sharing if you don't set the APN manually.

Resolution: The APNs were uploaded on the GSMA NSX platform, Altán uploaded on April 29 and was verified and tested on June 24 in validation of Apple devices.

Apple requested to validate the fixes included in the Beta version of iOS 15.6, Altán validated calls waiting, data APNs were corrected, and internet sharing APNs were added.

Apple indicated all fixes would be included in the next release of iOS starting on September 22.

THANK YOU

ALTÁN REDES

Altán
La red de todos

If you have any questions, please contact us

oswaldo.montes@altanredes.com