

# Access Network Interconnection (ANI) and Service Flows

# Abstract

- To formulate a document that enlist important requirements involve in establishing interconnect with a new operator.
- To identify service flows

# Contents

- Omantel Network
- Connectivity with RP
- Requirements for Interconnection
- Terminated Call Flows

# Overview of the Omantel network

**NGN**

Fixed: POTS, ISDN, SIP, and TDM/IP business trunks are the considered fixed subscribers, they are running through NGN or IMS(VoBB) network.

**CS**

Mobile: 2G/3G/4G subscribers are considered as mobile users, they are running through CS or IMS (VoLTE) network.

**IMS**

Omantel IMS network is based on fixed mobile convergence (FMC); this infer VoLTE and VoBB networks shares a common IMS core.

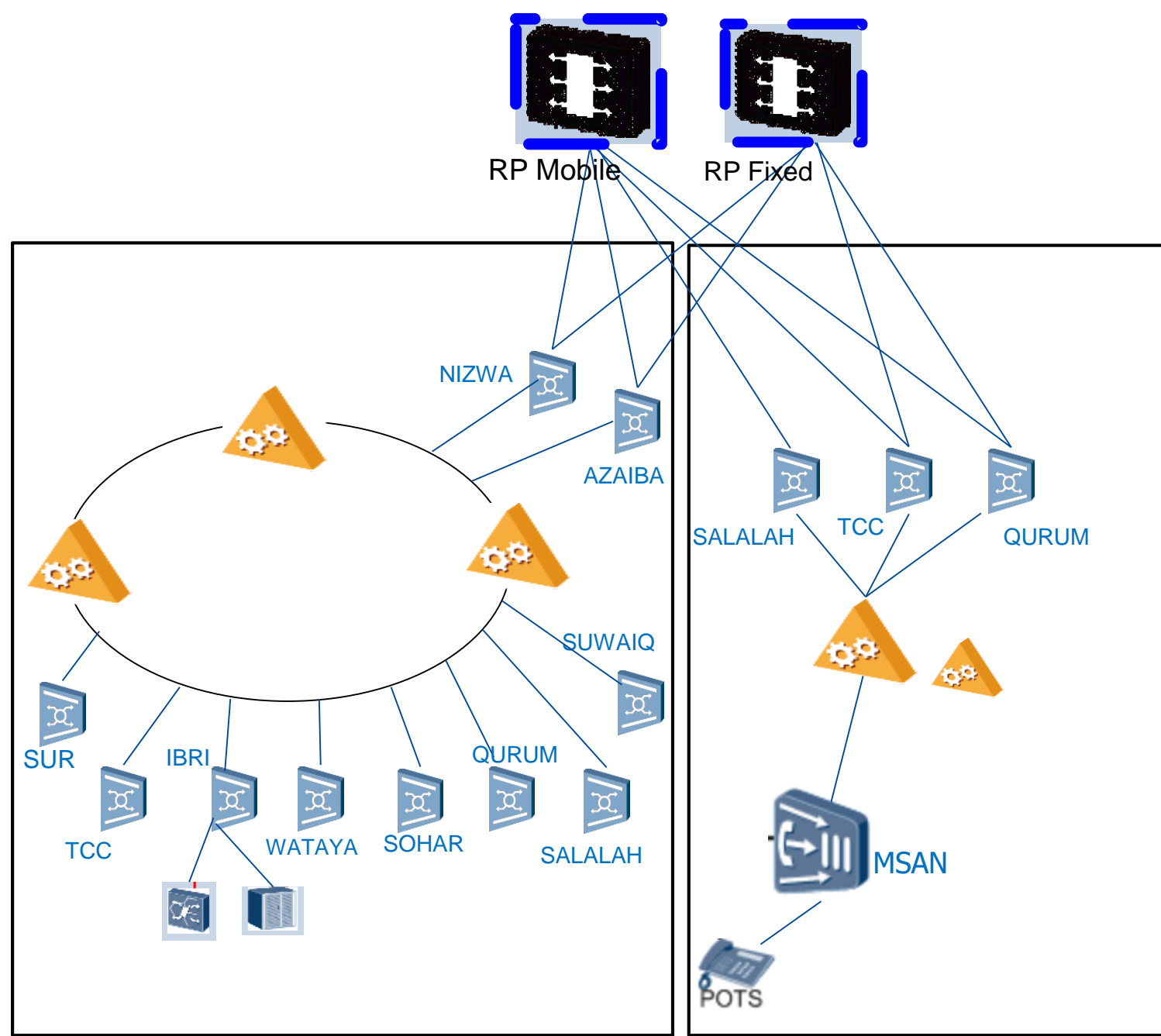
# Connectivity with RP

RP is connected with Omantel Fixed (NGN) as well as Omantel Mobile (CS) network.

As per agreed, RP traffic destined for Omantel fixed are dispatch at NGN.

Similarly, RP traffic destined for Omantel mobile are dispatched at CS.

For IMS, there doesn't exist direct interworking with RP; IMS bound traffic from RP are dispatched to CS and NGN, and then it flows internally to reach IMS.



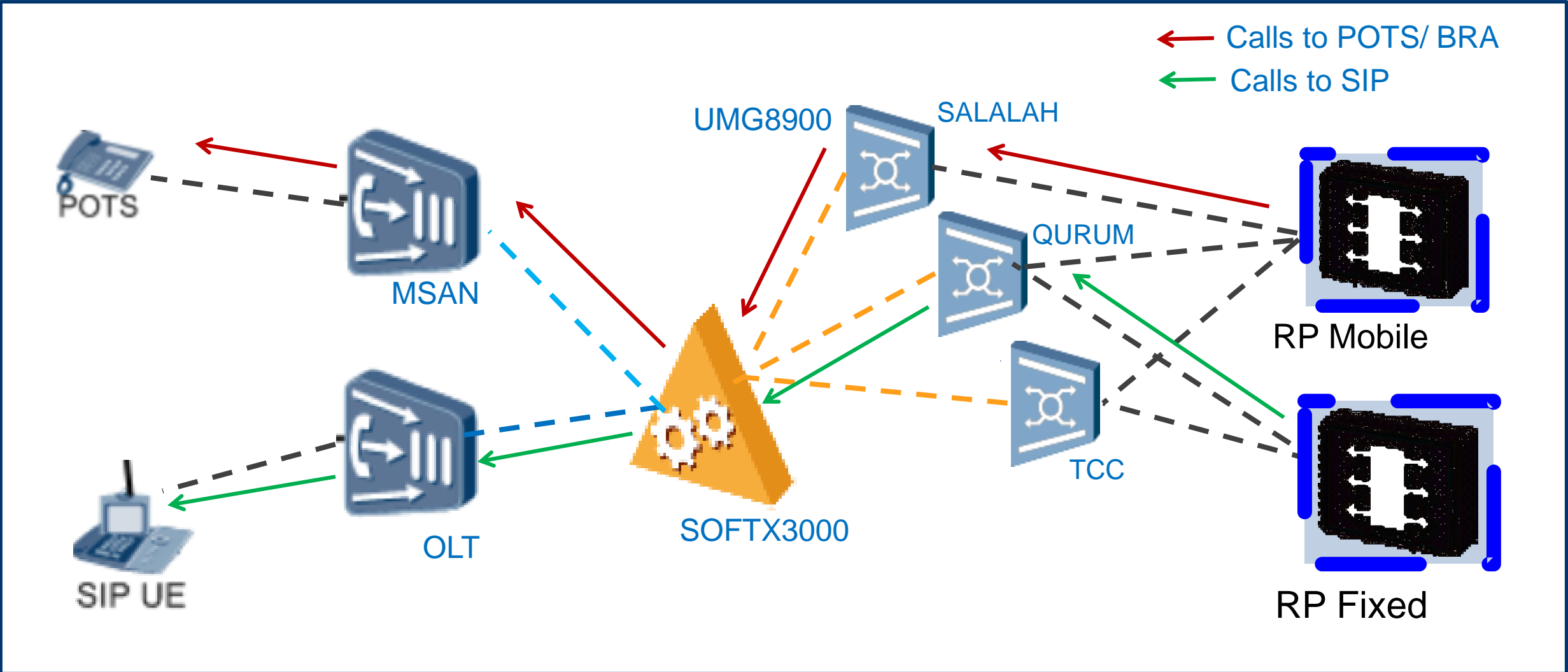
# Requirements for SS7 Interconnection

Parameters	Values (Example)
Network Indicator	National / International
DPC	12AB
OPC	AB12
Linkset Selection Mask	B1111 / B0000
Signaling Specification	ITU-T / ANSI
Signaling Link Circuit	16, 48, etc
Link Priority	
Group Direction	Incoming /Outgoing/ Bi-Directional
Circuit Type	ISUP/TUP
Caller NOA	National / International
Transmission Capabilities	Voice Services
	Unrestricted Digital Information Service
	Restricted Digital Information Service
	3.1kHz audio Services
	Unrestricted Digital Information Service with Signal Tone
	Video Service
	<b>Default All</b>
Audio Codec Prefer	G.711
Codec List	G.711, G.723, G.729, AMR, etc
Start CIC	0
End CIC	1048
Controlling Flag of Start Circuit	Slave, Master, Automatic

# Terminated Call Flows to Fixed Subscribers

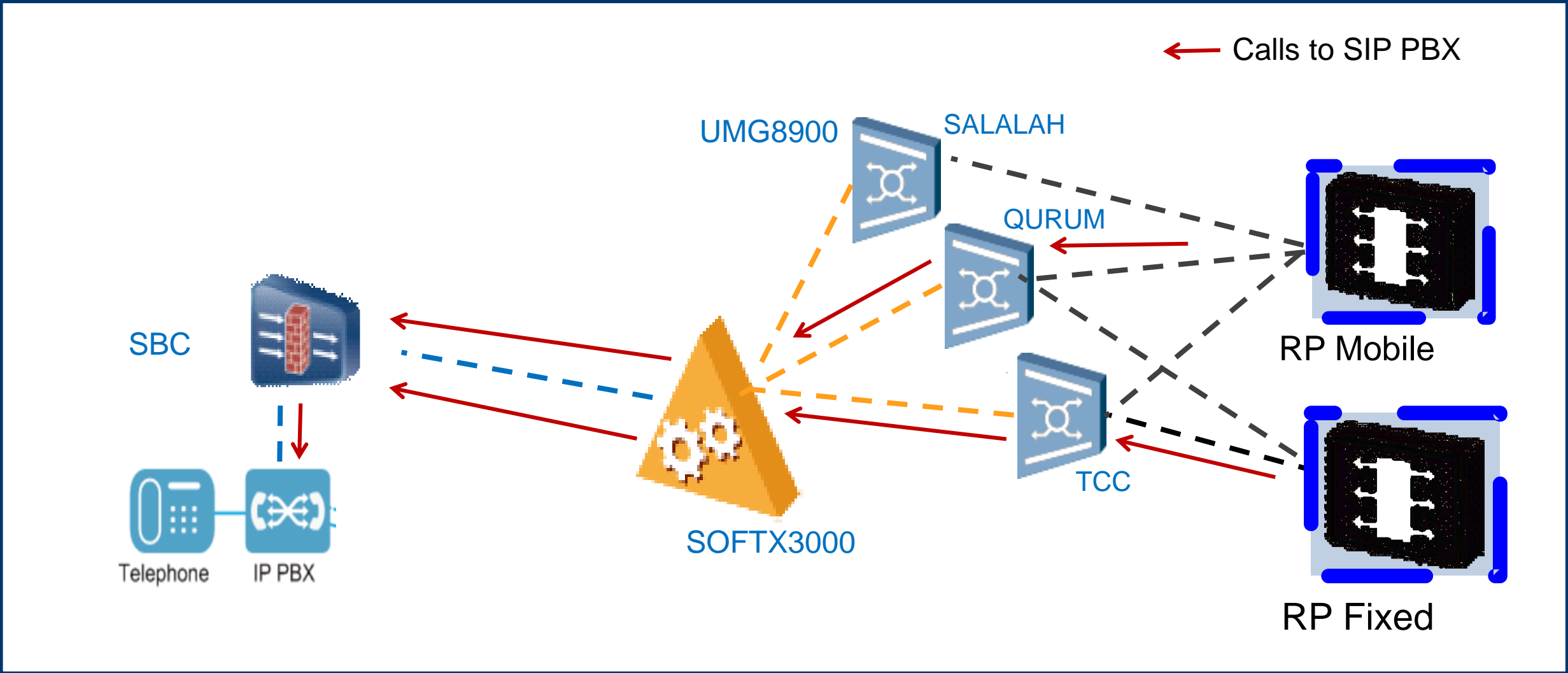
- a. Calls to POTS / BRA / SIP users
- b. Calls to SIP PBX
- c. Calls to TDM PBX
- d. Calls to VoBB Users

# a) Calls to POTS/BRA/SIP subscribers

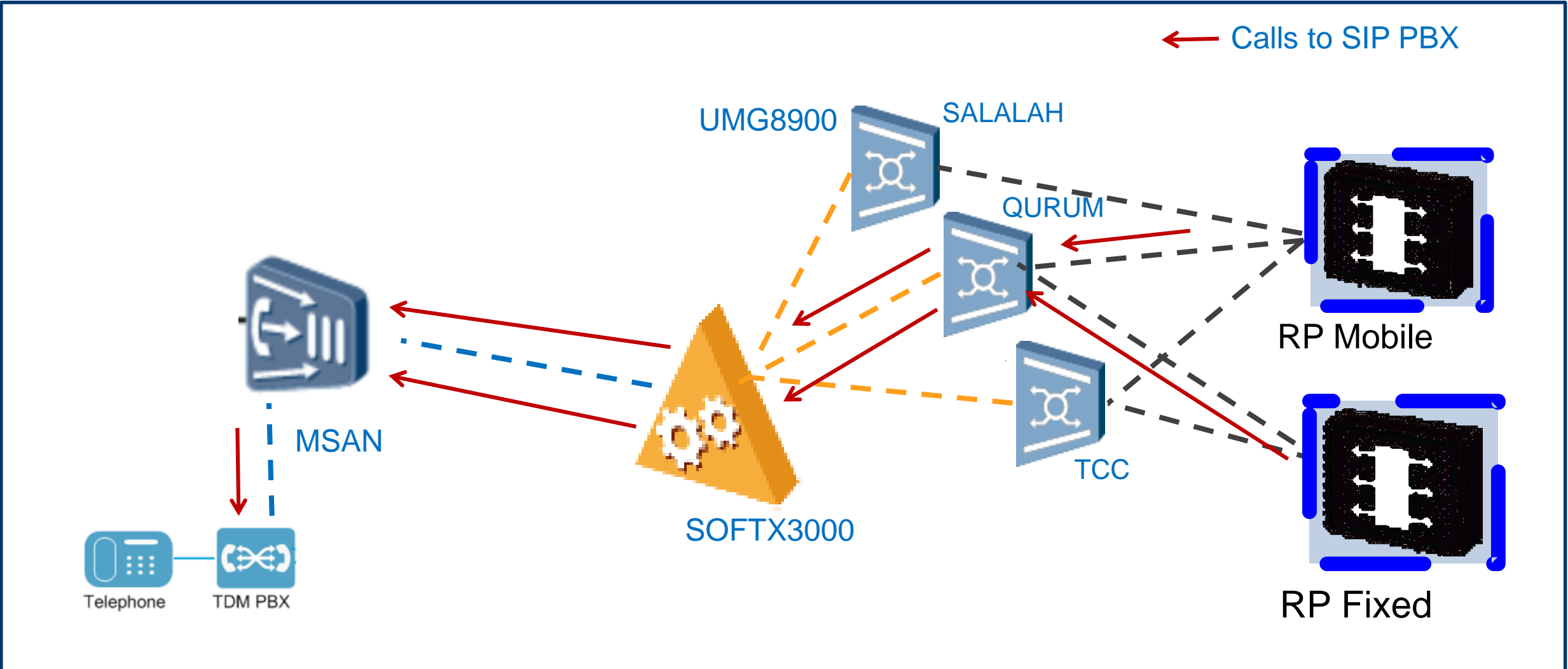




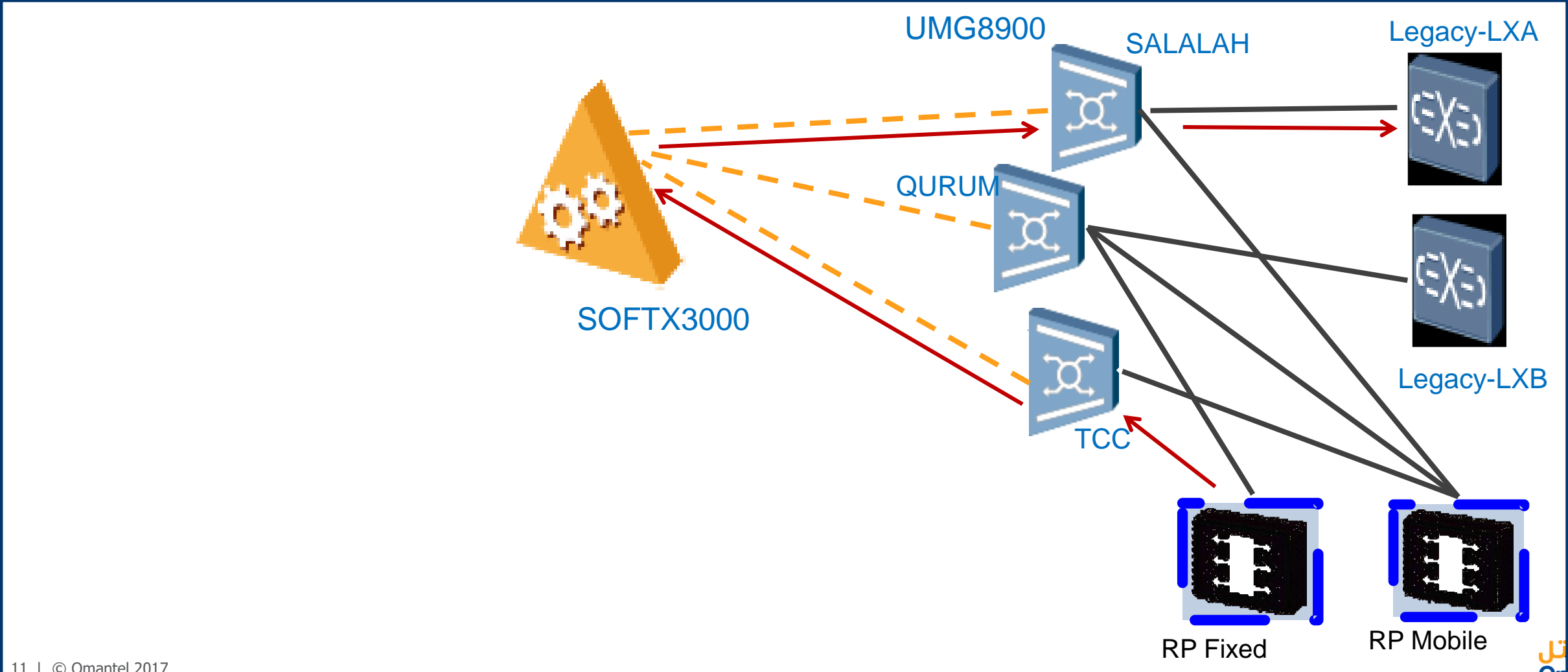
# a) Calls to SIP PBX



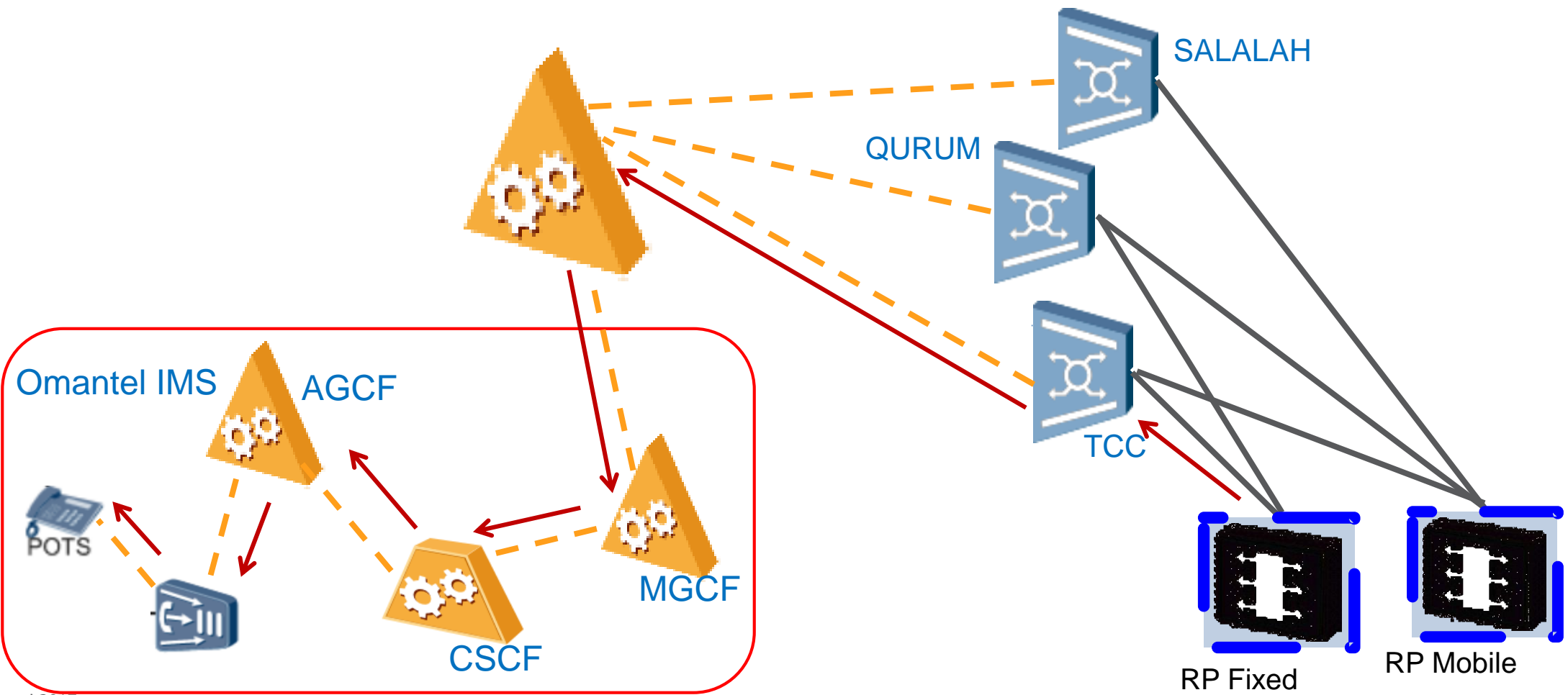
# a) Calls to TDM PBX



# a) Calls to Legacy Exchange Subscriber



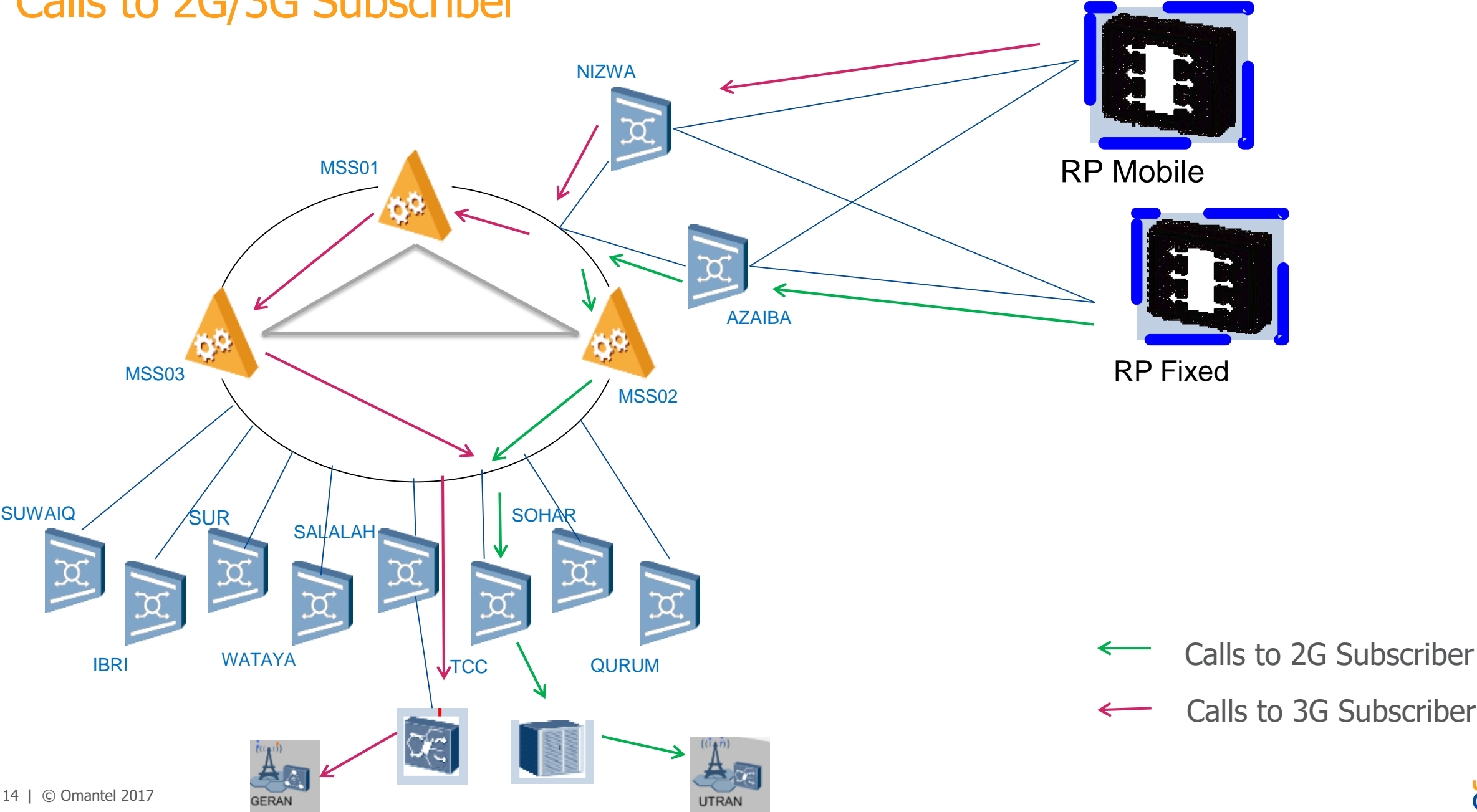
# a) Calls to VoBB users



# Terminated Calls to Mobile Subscriber

- a. Calls to 2G/3G Subscriber
- b. Calls to VoLTE Subscriber
- c. Calls to Rich Communication Services (Conference, MVaaS, IP-Centrex, etc)

# Calls to 2G/3G Subscriber



# Calls to VoLTE Subscriber

