MAPS™ Remote Controller (PKS111 and PKS113)

Multi-node Multi-Interface Simulation
Network Architecture

Client PC

MAPS™ Client

Remote Server Site

Multiple Servers

Multiple Servers

Multiple Servers

API Serialization over TCP/IP socket
Features

• A single Remote Client GUI to remotely control/monitor all the network interfaces and elements simulated by MAPS™ Servers; one or more MAPS™ applications can be installed in a single Sever.
• Allows integrated testing of different networks - Wireless, IP, TDM, and Analog (CAS, FXO, SIP, IMS, UMTS, ... )
• Suitable for testing any core network, access network, and inter-operability functions
• Remote MAPS™ provides access to all the functions of MAPS™ such as Testbed, Call generation, Call reception, Statistics and Results.
• Client-server communication is facilitated through a Listener over TCP/IP.
• Each Listener equates an independent instance of MAPS™ application at the server side. Each listener is associated with an Admin user
• Unlimited number of Remote client users can be defined at the server
• “Admin” has privileges to start /stop Testbed setup access, configuration files.
• MAPS™ Remote Client to control one or more MAPS™ Server (PKS111) or at the MAPS™ Server systems (MAPS™ Server with Multi-user capability – (PKS113)
• Simultaneous traffic generation/reception at 100% on all servers
Working Principle

Remote MAPS™
(PKS111 and PKS113)

Client Systems

Multiple Remote MAPS™
Clients connected to single
MAPS™ server system

MAPS Remote Client

MAPS Remote Client

MAPS Remote Client

Single Remote MAPS™
Client connected to Multiple
MAPS™ server system

MAPS Remote Client

Server Systems

PC 1

MAPS Core

Listener

PC 2

MAPS Core

Listener

PC 3

MAPS Core

Listener
# Software and License Requirements

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<tr>
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<th>PKS 111</th>
<th>PKS 113</th>
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<tr>
<td><strong>Client System</strong></td>
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<td></td>
<td><strong>License Required:</strong> MAPS™ Remote Client license (PKS111)</td>
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<td></td>
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Client–Server Communication via Listener

1. Connect
2. Lists all licensed MAPS™ for protocols
3. Selects protocol options to start MAPS™ server
4. MAPS™ Server
5. Provides IP and port address of MAPS™ server
6. Client connects directly to Server & Starts Protocol Emulation
Remote MAPS™ Call Flow

Listener added in Client
IP: 192.168.1.64
Port: 20005

Listener Started
IP: 192.168.1.64
Port: 20005

Connect
Send Server Parameters
Start Server

Start Server
Request Port Number
Send Port Number

Send Port Number
Connect to Server
Start Test Bed

Start Test Bed
Start Call Generation

Start Call Generation
Call Generation Started

Stop Server
Stop Server

Stop Server
Stop Server

Signaling Gateway Started

Signaling Gateway Stopped
Multiple Users

Multiple users can be created on each MAPS™ Server. One Admin user must be created to manage the test bed setup.

- **ADMIN**
  - Creates Testbed Setup Profiles
  - Starts Testbed Setup for all users

- **User1**
  - Example,
    - View Testbed Setup1
    - Configuration Profiles #1

- **User2**
  - Example,
    - Testbed Setup1
    - Configuration Profiles #2

- **User3**
  - Example,
    - Testbed Setup1
    - Configuration Profiles #3

- **User4**
  - Example,
    - Testbed Setup1
    - Configuration Profiles #4
Testbed Setup Configurations

For Admin

For Users
Remote MAPS™ for IMS Network
Remote MAPS™ Server Configuration
End-to-end Call from Non-Roaming User to Non-Roaming User Across the Network
End-to-End Registration & Call Control Procedures

Call Reception at Verizon Network

Call Reception at ATT Network
Remote MAPS™ for TDM Network
Remote MAPS™ Server Configuration for T1E1

- Creates and Starts Testbed Setup

T1E1 PC
- MAPS Listener, Port 4000
- MAPS Listener, Port 6000

OCTAL T1/E1 PCIe Card

User1
- View Testbed Setup1
- Configuration Profiles for Card #1,3,5,7

User2
- Testbed Setup1
- Configuration Profiles for Card #2,4,6,8

Remote MAPS™ to show how multiple users share the channel resources on a single T1 E1 Server to simulate calls.
THANK YOU