R&S®CMX500 - 5G NR RADIO COMMUNICATION TESTER

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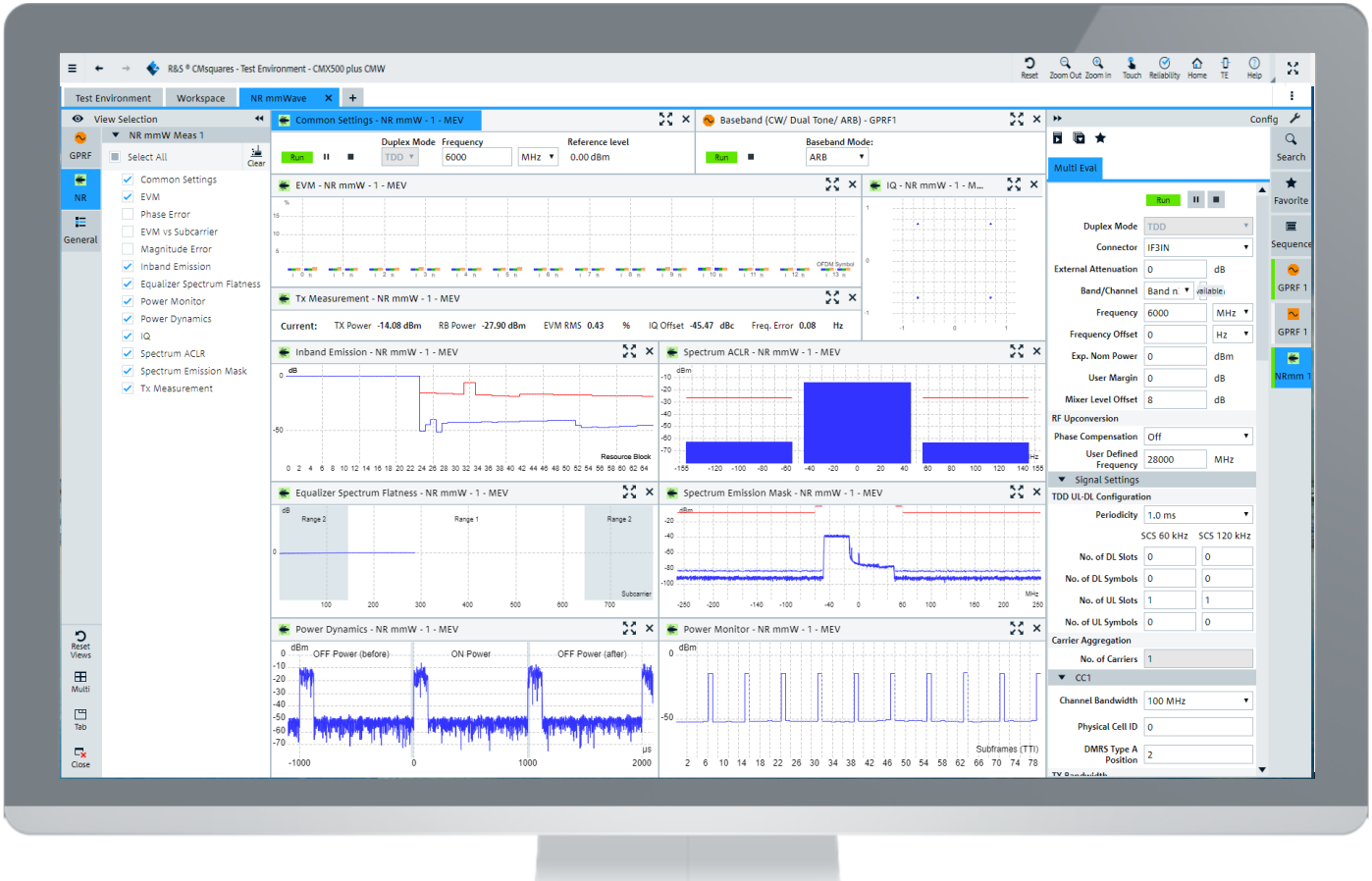
CMX500 5G NR Signaling Tester

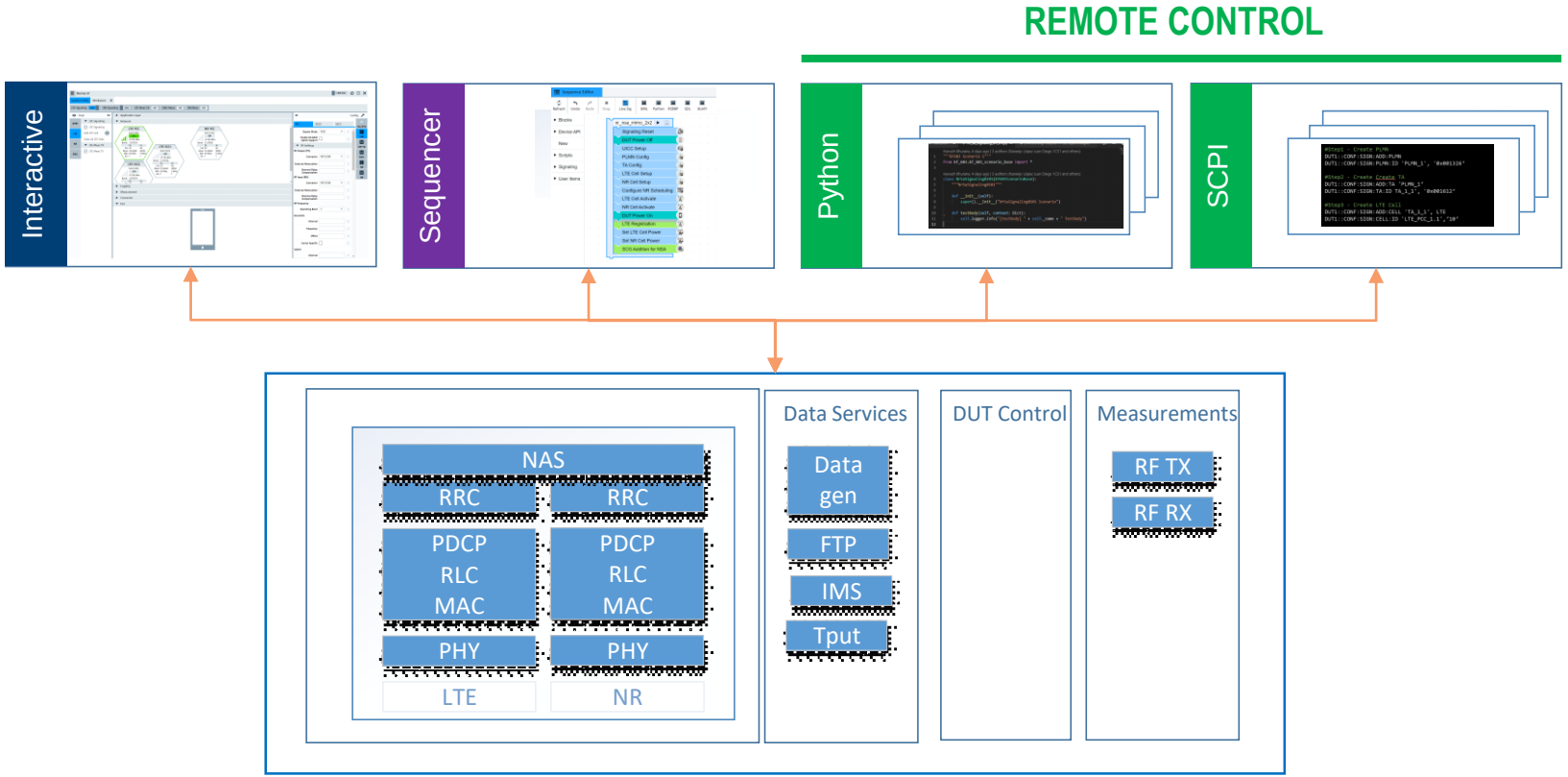
- Future proof 5G NR signaling test platform
- Independent Operating System (Linux)
- Modular and scalable HW-Architecture
- 20 Gbps+ End-to-End IP Data Performance capability
- FR2 Multiband Remote Radio Support (24 – 43.5GHz)
- Single Web-based GUI for RF, Protocol and App Tests
- LTE Anchor support for up to 8CC LTE, 8x4 DL MIMO and 1024QAM (with CMW500)



CMsquares

UNIFIED USER INTERFACE FOR PROTOCOL, RF AND APPLICATION TESTING

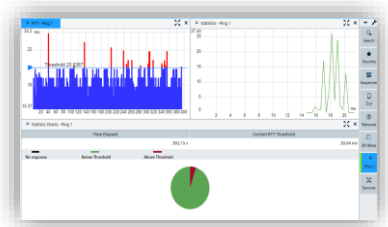
CUSTOMER INTERFACES

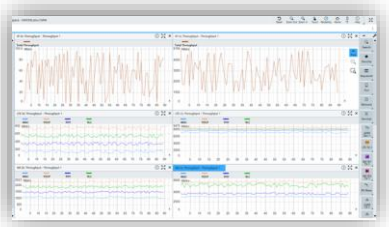


R&S®CMX500 APPLICATION TEST

Description:
► Fully integrated „In a Box“ IP data testing environment for 5G NR FR1/FR2 NSA and SA testing
► Optimized IPv4/IPv6 and Server environment for high throughput and low latency verification
► IP measurements and integrated tooling to support 5G E2E IP throughput test and latency measurement use-cases
► “Ready to use” and fully integrated application servers for testing common internet services e.g. File-Transfer, Web-Browsing, IMS-Services, Media-Streaming…
► “Simple to use and easy to configure” by **R&S®CMsquares** interactive mode or via remote (SCPI & XLAPI)

CMsquares

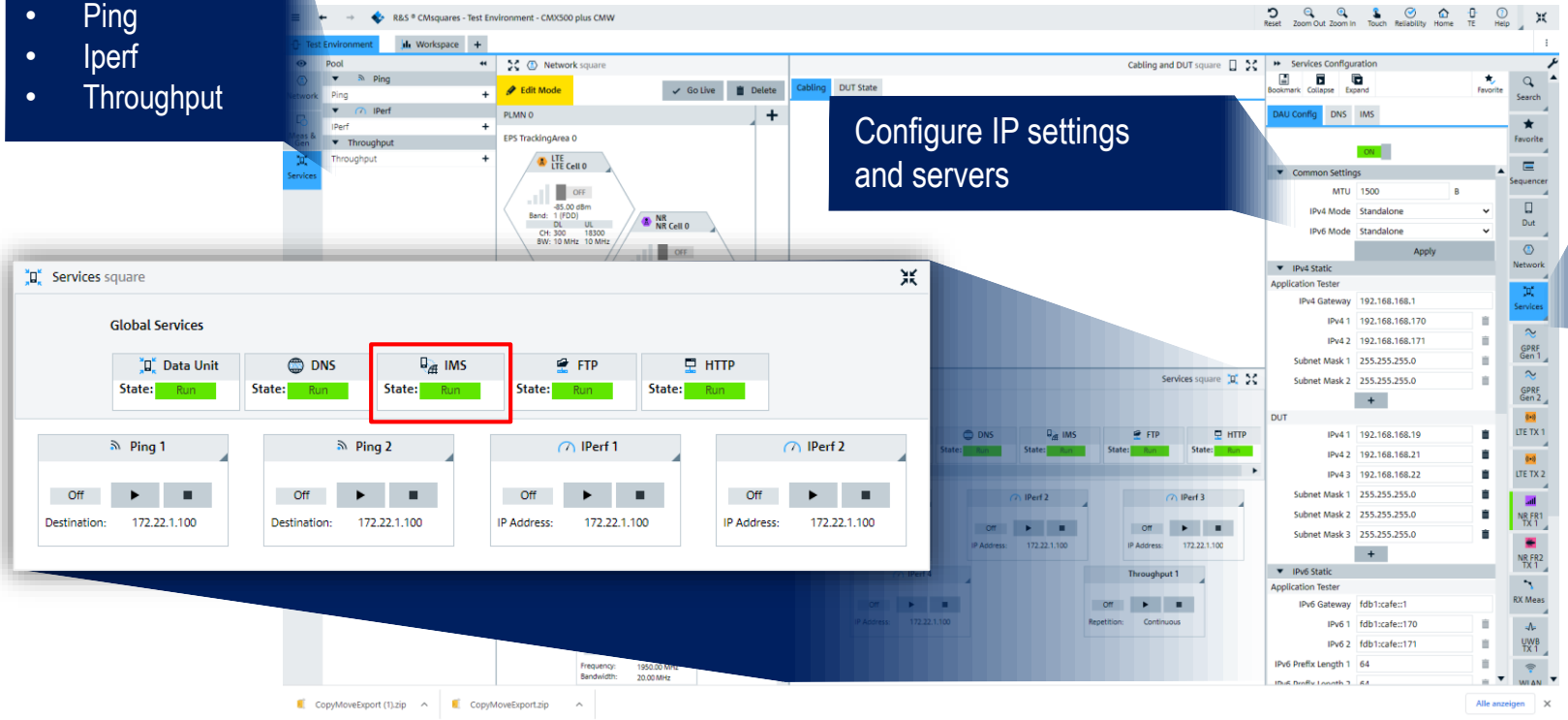




R&S®CMX500 APPLICATION TEST

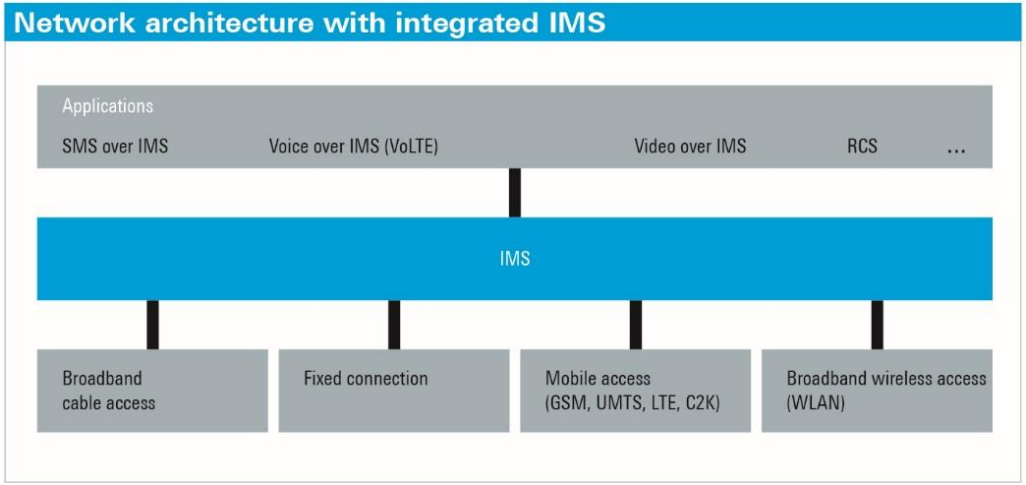
Add measurements to Workspace

- Ping
- Iperf
- Throughput



INTRODUCTION IMS – IP MULTIMEDIA SUBSYSTEM
DEFINITION

►IMS is the enabler for VoLTE & VoNR, SMS over IMS and value adding services.



►IMS is a global access-independent and standards-based IP connectivity and service control architecture that enables various types of multimedia services to end-users using common Internet-based protocols.

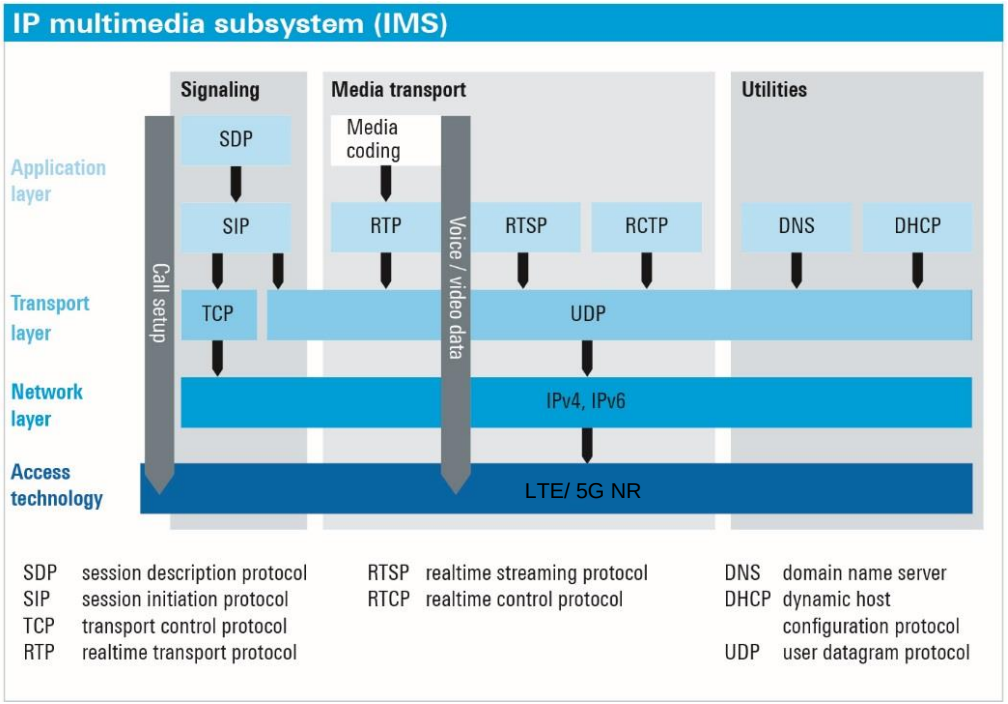
IMS PROTOCOL STRUCTURE
TEST SOLUTION REQUIREMENTS

Virtual phone simulation

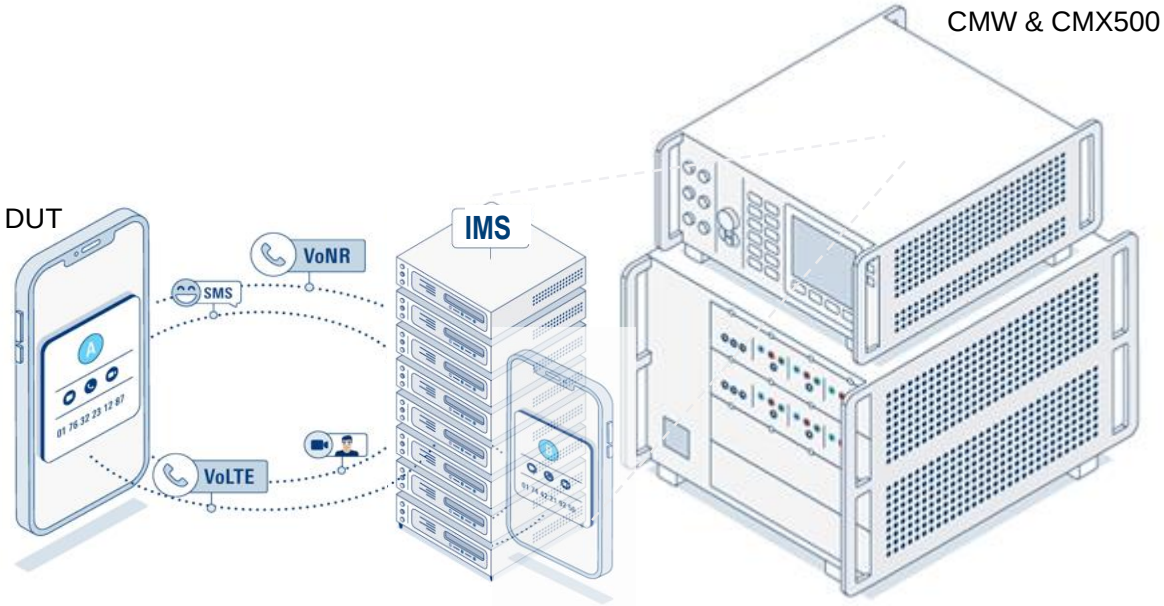
IMS Subsytem emulation

IPv4/IPv6 infrasturcture

LTE / 5G NR Network emulation



TEST SETUP



IMS SERVER

Use Case:

- Verification of IMS related functions e.g. registration procedures or voice/video calls

- Configuration of the internal IMS server
  - Switch ON/OFF
  - Configure parameters:
    - e.g. IP Sec Encryption Algorithm
    - Integrity Algorithm a.o.
  - Perform Voice and Video calls
  - …