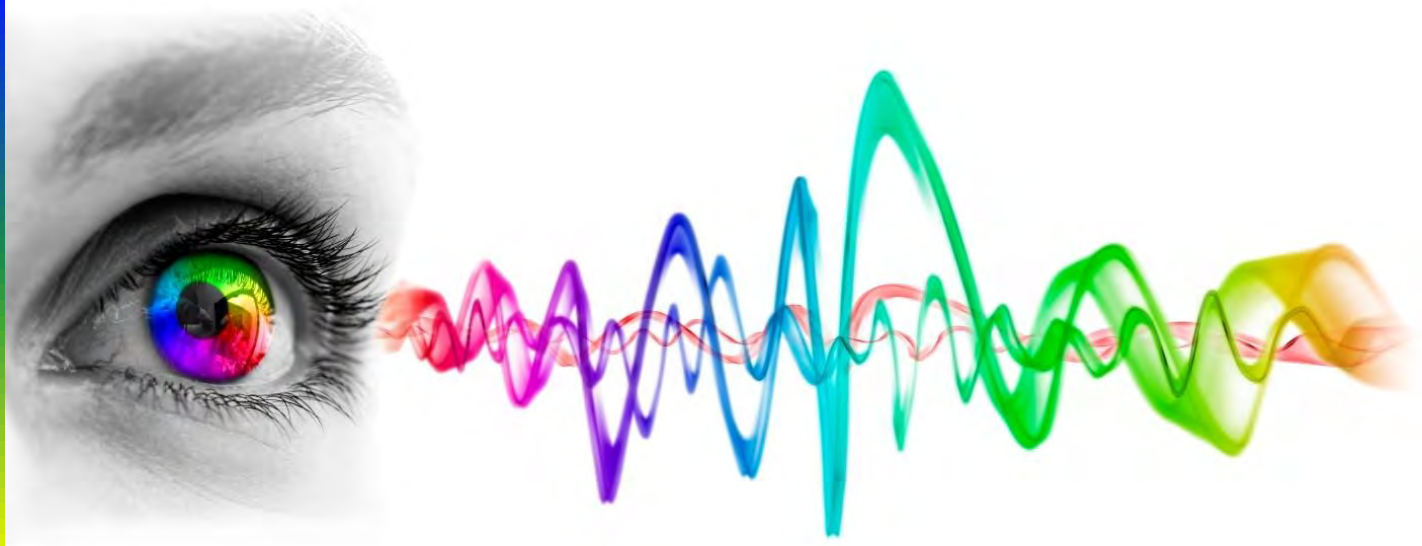
T-DAB AND DVB-T2 TEST FACILITIES



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Contents

1 INTRODUCTION

DVB-T2 has been launched in South Africa and we have two national multiplexes operational. T-DAB has only been operational as test transmissions in the Gauteng Province running a SFN between Johannesburg and Pretoria.

LS of South Africa Radio Communication Services developed its own transmission test facilities for T-DAB as well as DVB-T2. The main purposes for the development of these facilities are the following:

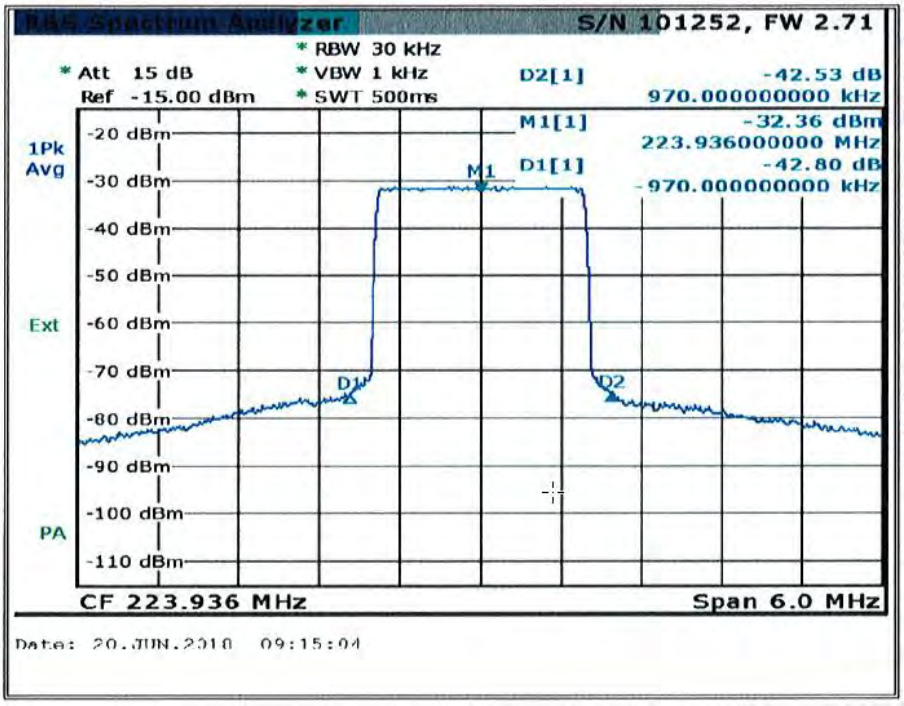
- Training of technicians and engineers
- Perform tests on different input formats into the transmitter and the multiplex
- Perform commissioning tests
- Demonstrate the relationship between MER and other test parameters
- Power consumption and efficiency testing

1.1 T-DAB Facility

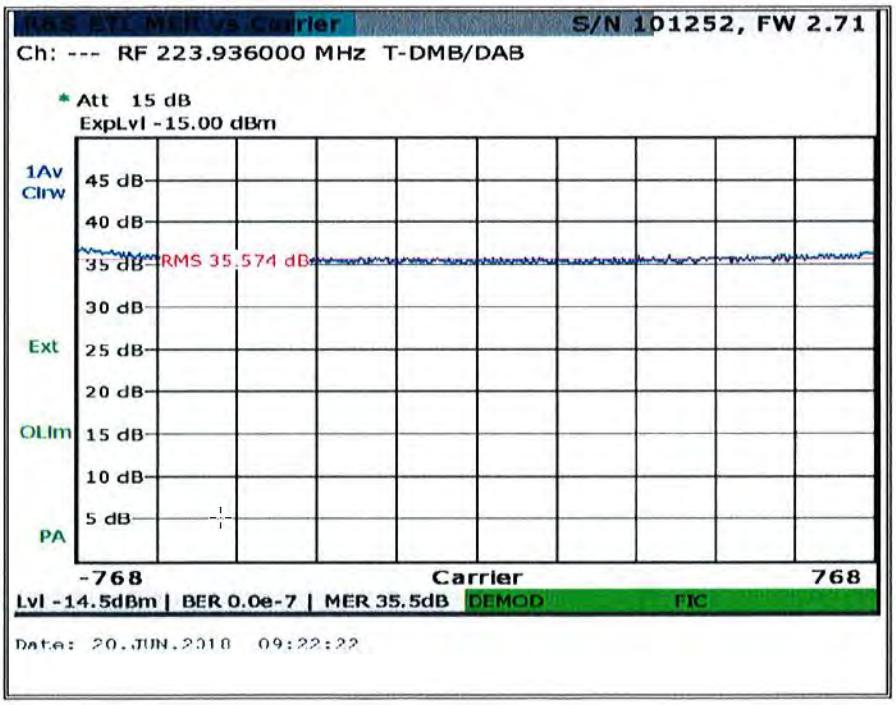
The picture below shows our T-DAB test rack installed in a 19” rack with aircon cooling and space for standby power, housed in the same container. The housing in the picture is a converted 3 X 3 shipping container.

This section contains some typical measurement samples:

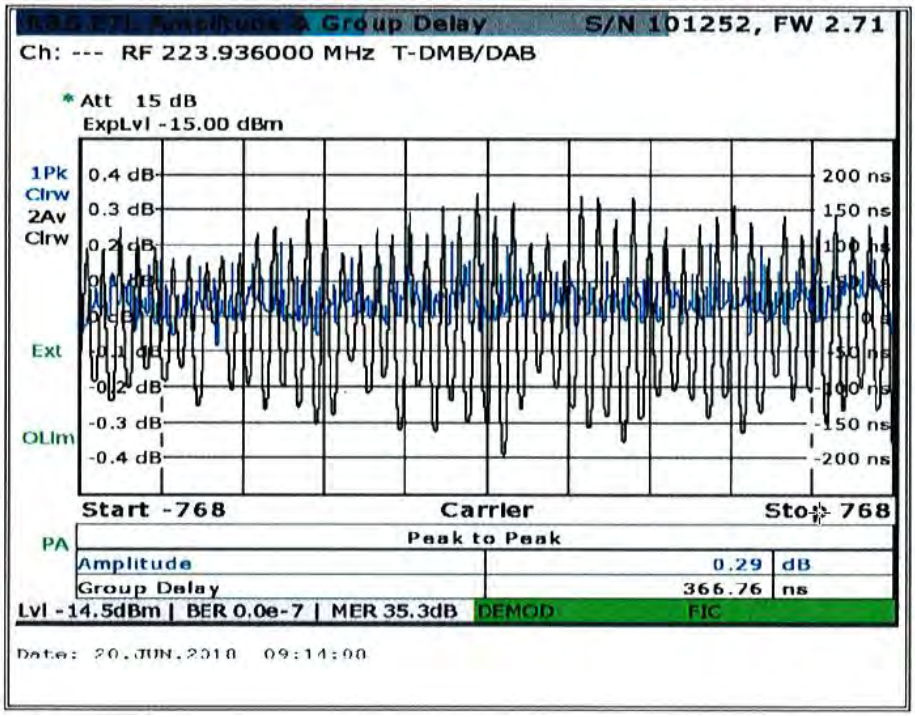
RF spectrum passband plot with shoulder attenuation



In band MER



Amplitude & group delay

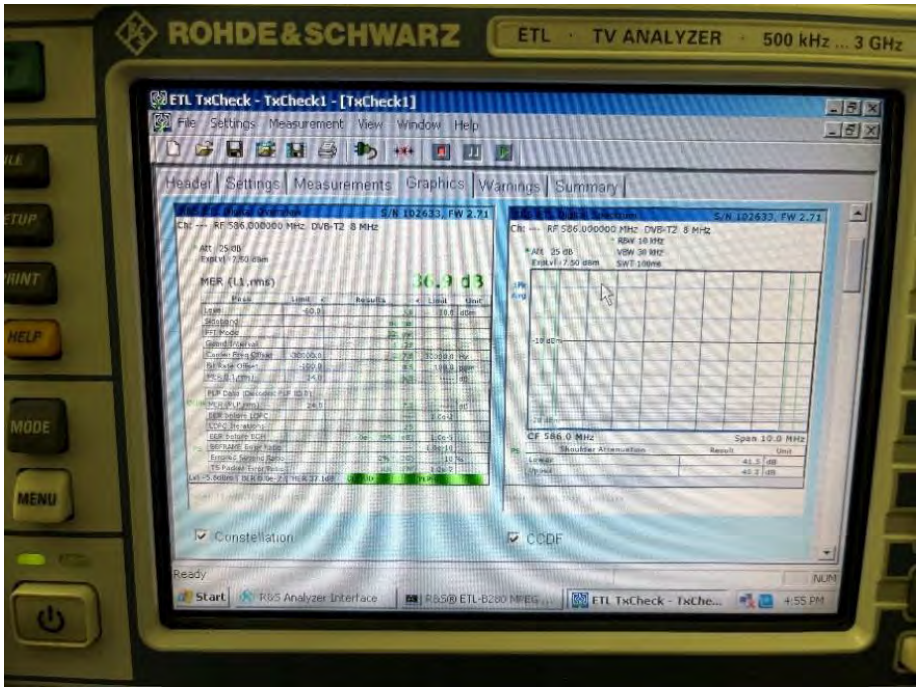


1.1 DVB-T2 Facility

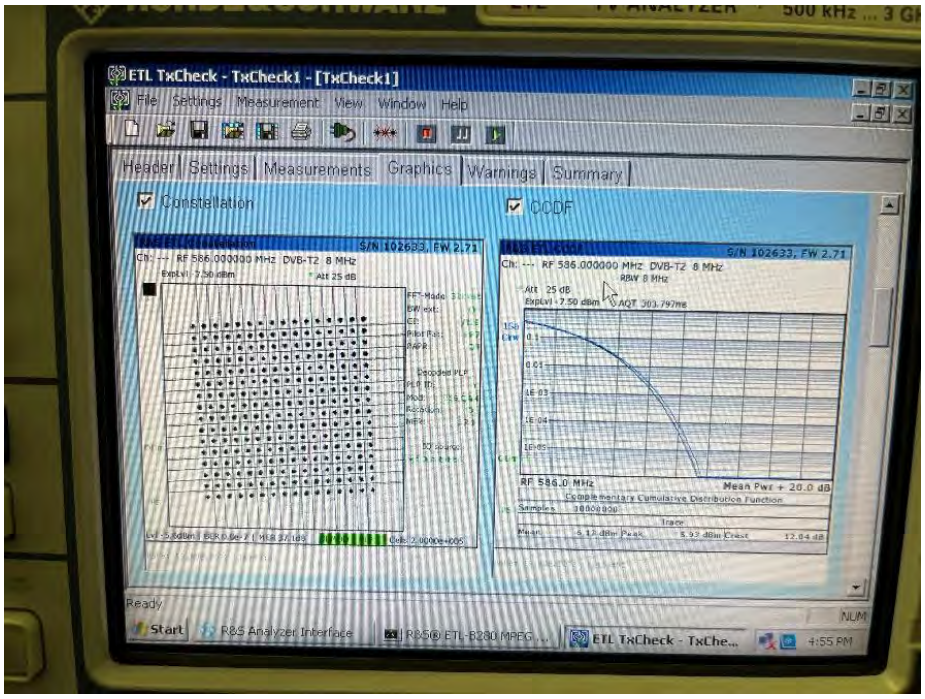
Below you will find a picture of our DVB-T2 test rack installed in a 19” rack

This section contains some typical measurement samples:

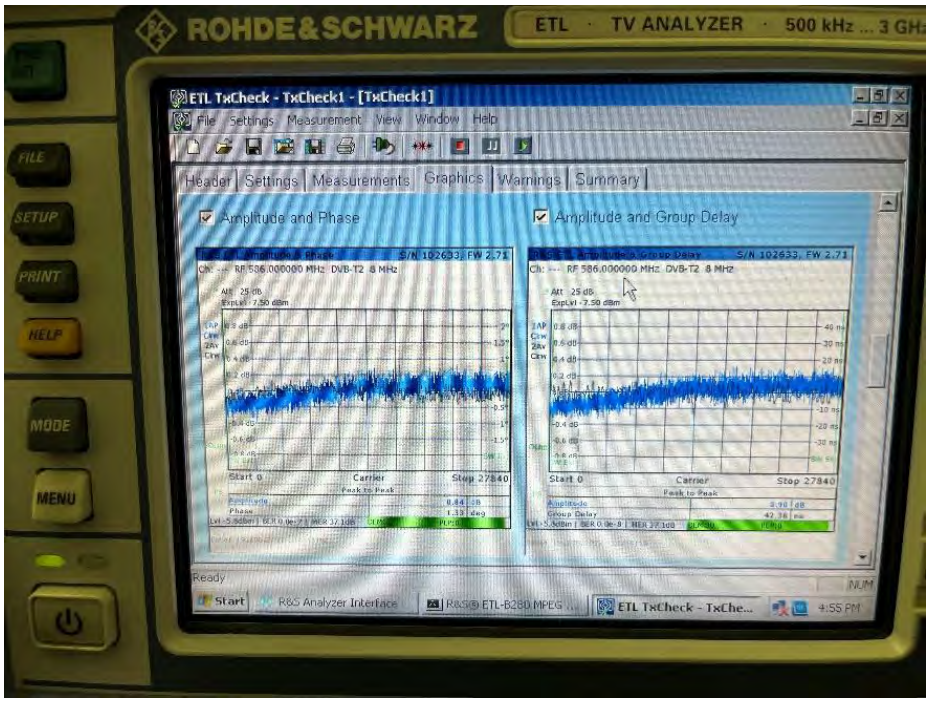
MER L1 & Shoulder attenuation



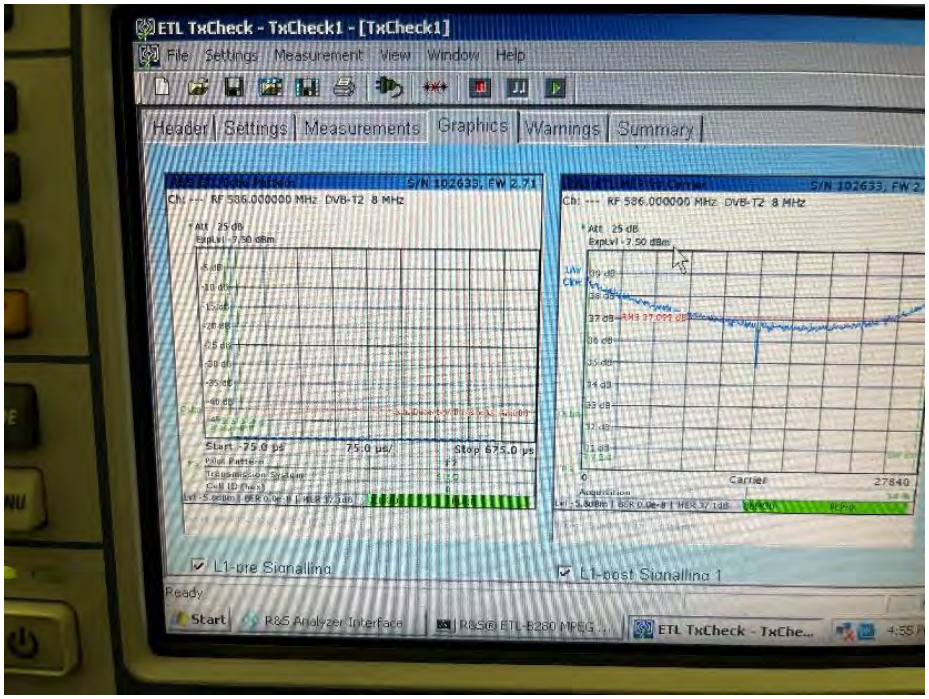
Constellation & Complementary Cumulative Distribution Function (CCDF)



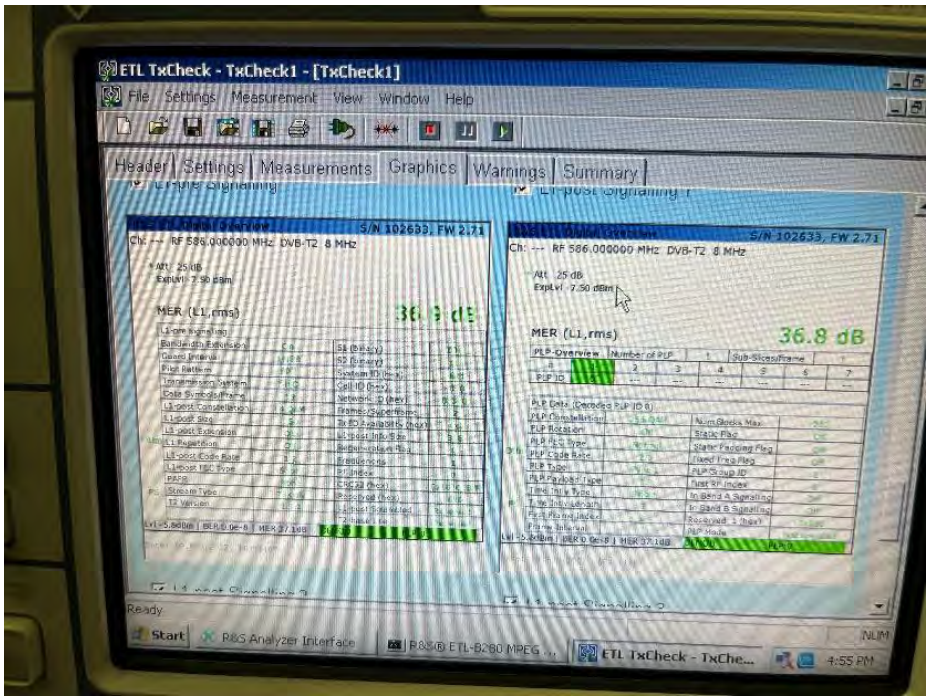
Amplitude and Phase & Amplitude and Group Delay



Echo Pattern & MER vs Carrier



Digital Overview of measurements



2 Advantages to Broadcast Industry Players

Our T-DAB & DVB-T2 labs offer the following advantages to the broadcast industry:

- Provide hands-on transmitter and measurement training.
- Define base line or minimum specifications for transmitter performance.
- Confirm transmitter efficiency specifications.
- Determine the ideal cooling requirement for different systems.
- Compare measurement results from different measurement devices.
- Evaluate the signal quality performance of transmitters with different input formats.
- Perform demodulated program output performance with different audio multiplex input levels.
- Perform video quality tests on different video program content.