ARFTG NVNA Users' Forum at IMS 2005

Thursday, June 16 from 5:00 to 7:00 pm in room Regency C, Long-Beach Hyatt

1. Dominique Schreurs (K.U.Leuven) opens the session and advertises the next meetings:
    - EUMW in Paris (France) on October 6 at 4:30 pm; this event is co-sponsored by the European Network of Excellence TARGET
    - ARFTG Fall Meeting in Washington, D.C. on November 30 at 5:00 pm.
    - IMS 2006 in San Francisco

    A sign-up list is passed on which 45 people register; 17 persons attend this forum for the first time.

2. John Sevic (Maury Microwave) reports that some customers ask for a verification-kit applicable on the LSNA, more precisely for the phase calibration.
    A discussion starts concerning the recent decision of NIST to close its Nonlinear Device Characterization Project. NIST efforts on phase calibrations and development of metrology for wireless systems will continue.
    Another topic is that Maury feels a strong need of education from the customers. Expressed simply, the users don't know what to do with the measurements results of the LSNA to improve their design on a systematic base.

3. Chistopher Silva (Aerospace Corp.) reports on his quest for multitone signals able to characterize adequately the model of TWT's. Several participants (Alain Barel, Jose Pedro, Dominique Schreurs, Yves Rolain) state that:
    - the model has only validity for the same class of signals as the one used for the characterization
    - for characterization of low-frequency memory effects, the tones must be spread over a frequency band at least equal to the inverse of the finite time response
    - the statistics of the multisine is paramount for characterization of low-frequency memory effects

4. Mike McKinley (Georgia Tech) reports on part of his PhD research: the influence of the signal statistics of the OFDM-like multisines in terms of Error Vector Magnitude (EVM) when measuring with a VSA.
    It was suggested that a metric that takes better advantage of the VSA's ability to provide phase and time-domain information be considered.

5. Patrick Roblin (Ohio State Univ) presents an enthusiastic short communication on the pulsed and IF measurements with LSNA.

6. Jason Breitbarth (Picosecond Pulse Labs) presents recent results of the nonlinear transmission line used as comb-generator, more specifically the phase noise.

7. Jose Carlos Pedro (Univ de Aveiro) presents the possible correlations between design-rules based on quick two-tone measurements (the "sweet-spots") and those based on a more realistic multisine excitation signals.

Informal discussions follow until the manager of the hotel expels us from the room at 7:45 pm.