A CONCISE HISTORY OF THE ICTS

By the ITCS Chairman:
Mr. Mikel R. Ryan

Patuxent River, State of Maryland, United States of America

38th Meeting of the International Consortium for Telemetry Spectrum
Glendale, State of Arizona, United States of America, 9 November 2016
“Leaders in the worldwide T&E community converged from June 8-10 1999 in Paris France, to discuss the topic of telemetry spectrum encroachment . . . . (and submit) a proposal to form an International Consortium for Telemetry Spectrum . . . . Conference participants agreed that such a forum for discussion is critical to the future of T&E because forecast spectrum threats currently are placing billions of dollars of T&E infrastructure at serious risk around the Globe. . . . . U.S. support at the conference included a keynote address by Dr. Patricia Sanders, Director of Test, Systems Engineering and Evaluation, U.S. Department of Defense . . . .
Purpose of the ICTS

• An organization under the International Foundation for Telemetering.
• Three Officers: Chair, Vice-Chair & Secretary. Three ITU Regional Coordinators (Europe/Africa, The Americas, & Asia/Pacific) to gather data/issues involving Aeronautical Mobile Telemetry (AMT) and facilitate relationships.
• Increase the awareness of important roles and urgency of telemetry and to seek global collaboration in meeting global telemetry needs because:
  – Current AMT bands do not meet current demand for bandwidth.
  – If telemetry shortages are not addressed, lack of telemetry can result in serious impacts until resolved: delay, cost impact, risks of program failures, impact on public safety, national security, national economy, national competitiveness.
  – Telemetry needs to be harmonized at a regional or global level.
Agenda Item 1.5 of *WRC-2007

“. . . to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry, in accordance with Resolution 230 (WRC-03).”

Roughly Translated: “Secure a minimum of 650 MHz worth of new frequency band allocations above 3 GHz worldwide for AMT applications.”

*World Radiocommunications Conference
The Keys to WRC Success

- Assemble the best team possible regardless of monetary cost.
- **Sun Tzu’s Art of War:** “The victorious strategist only seeks battle after the victory has been won.”
  - Minimum eight-year non-stop process due to local/area/regional/national/international concurrence with all the candidate band users, current & future.
  - National/International Outreach/Public Relations by ICTS Road Warriors: Japan, Korea, India, Thailand, Canada, Brazil, South Africa, Ukraine, etc.
  - Presentations/negotiations at Ranges & Regional Conferences/Organizations: APT, SETE, CITEL, ITC, PACOM, ETC, ETTC, RSRWG, AFTRCC, etc.
  - Many formal papers & technical reports published promoting ICTS goals.
  - Comprehensive sharing studies.
- **American Civil War General Nathan Bedford Forrest:** “Get there firstest with the mostest.”
2016 International Telemetering Conference

WRC Regional Alliances

Combined Communications Electronics Board (5)
North Atlantic Treaty Organization (28)
Inter-American Telecommunication Commission (35)

Arab Spectrum Management Group (22)
European Conference of Postal and Telecommunications Administration (48)
Asia Pacific Telecommunity (38)

Regional Commonwealth in the Field of Communications (12)
Caribbean Telecommunications Union (20)
African Telecommunications Union (46)
Primary ICTS Sponsor

Mr. Derrick Hinton

*Principal Deputy of the Test Resource Management Center

*US Department of Defense
2007 World Radiocommunication Conference in Geneva

- Approximately 150 countries, 700 Sector Members & Associates, National & International Organizations, Special Interest Groups = 3,000 participants.
- 26 Days (22 OCT to 16 NOV): Plenary Sessions, Working Groups, sidebar meetings, working dinners, socials, etc.
- Exhibition Hall Participants include major Telecommunications Companies and Governmental Agencies (like USA’s NASA).
ICTS BOOTH AT THE WRC-2007: WHY??

- There are 190 ITU Member Nations (“Administrations”):
  - Perhaps 150 Administrations attend WRC.
  - Their Delegations are *always* shorthanded/swamped.
  - Only 15-20 Administrations attended Agenda Item 1.5 Working Sessions.

- FACT: Most Delegates *DO NOT* read details of most Agenda Items; they learn about Agenda Items *at the Conference Exhibition Hall*.

- *(Initial)* Mission of the ICTS Booth:
  Educate WRC-2007 Delegates about the importance of Agenda Item 1.5 to their national economies and security.
An ICTS Business Meeting & Training Session
Real Mission of the ICTS Booth

• Promoted/explained our Agenda Item 1.5 to the Delegates from our ICTS Booth.
• Served as **Rumor Control & Quick Reaction Team** to expeditiously confront misconceptions and head off hostile proposals.
• Functioned as on-call AMT subject matter experts.
• Helped proof the numerous Conference documents/legislation/legalize.
• Served as an informal after-hours gathering place for several Delegations.
Our ICTS Booth
Some of the ICTS Team
An Aircraft Model Raffle Winner
Informal After-Hours Gathering Place
Gloating at Our Moment of Triumph

Wednesday 14 NOV 2007 5:05 PM Geneva Time
VICTORY!!
AMT GAINS FROM WRC-2007

- **5091-5150 MHz**: is recognized/allocated **globally** as a “harmonized AMT band.”

- **5150-5250 MHz**: Allocated to all of ITU Region 1 (with the exception of the Arab League) and Brazil only in ITU Region 2 (The Americas).

- **4400-4940** and **5925-6700 MHz**: for ITU Region 2 (with a few countries declining) plus Australia in ITU Region 3 (Asia/Pacific) for the **4400-4940 MHz band only**. *(These two bands are politically sensitive in ITU Regions 1 & 3 despite studies showing manageable impact to incumbent services.)*
AGENDA ITEM 1.5 - Allocation of Spectrum for Flight Test Telemetry. Military and civilian aircraft flight testing places extraordinary demands on wireless systems, sending sensor data to test ranges around the world. Considered by some to be one of the greatest overall successes at this WRC, the advocates for additional spectrum succeeded in identifying sufficient bandwidth to accommodate higher quality and greater detail in flight test telemetry than originally anticipated. The culmination of more than a decade's work, DOD flight test ranges will now have the ability to accommodate more robust scenarios.”
The ICTS continues to produce and distribute studies and technical reports in support of these efforts Aggressive Legislative and Engineering (hardware/Software/personnel) implementation by several domestic Administrations (who usually have significant National Aerospace Industries) in the approved bands and in initiating a process for international coordination so we can use our new bands “efficiently, effectively, conspicuously and NOW.” The ICTS also assisted in developing a strategy for global harmonized allocations.

- The ICTS has identified/confronted/defended and coordinated or negated dozens of intrusive band reallocation initiatives that would harm our AMT mission.
The ICTS continues to produce and distribute studies and technical reports in support of these efforts.

The ICTS, rather than reflexively, defensively face encroachment efforts, has adopted a pro-active posture to actually augment our existing AMT spectrum assets. For example, a possible tasking for the ICTS involves investigating the feasibility of augmenting our current international AMT bands. We have no current spectrum allocations for AMT in the Ku-, K- and Ka-Band range (20–36 GHz), but we should actively, expeditiously determine whether we may need frequency spectrum in that range in the future, year 2020 and beyond.
QUESTIONS?