# 2016 International Telemetering Conference

# 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**

# 2016 International Telemetering Conference

## *"ITEA Regional Vice President Participates in European Spectrum Conference"*

### ITEA Journal September/October 1999

*"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 . . . .*

# 2016 International Telemetering Conference

# 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.**

# 2016 International Telemetering Conference

# 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**

# 2016 International Telemetering 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)**

Organization of American States | More rights for more people

**Arab Spectrum Management Group (22)**

ASMG GE06 Frequency coordination

**European Conference of Postal and Telecommunications Administration (48)**

European Conference of Postal and Telecommunications Administrations

- 48 European countries cooperating to regulate posts, radio spectrum and communications networks

**Asia Pacific Telecommunity (38)**

**Regional Commonwealth in the Field of Communications (12)**

**Caribbean Telecommunications Union (20)**

**African Telecommunications Union (46)**

# 2016 International Telemetering Conference

## Primary ICTS Sponsor

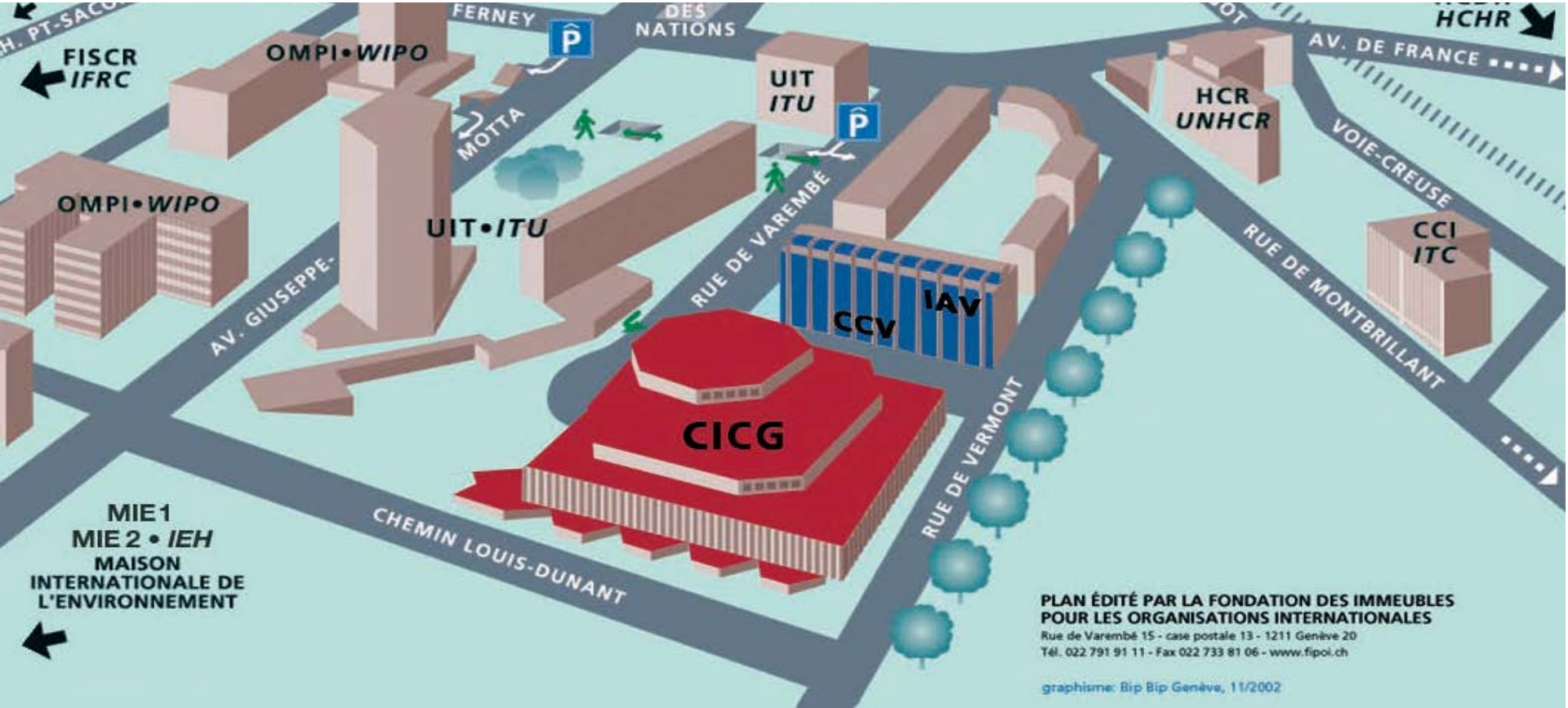
## Mr. Derrick Hinton

***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).**



# 2016 International Telemetering Conference

## 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 <u>at</u> 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.**

# ICTS Booth Staff

# An ICTS Business Meeting & Training Session

# 2016 International Telemetering Conference

Greeter

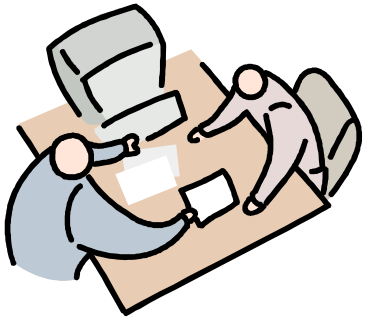
Attractors

Continuous video

Model airplane raffle

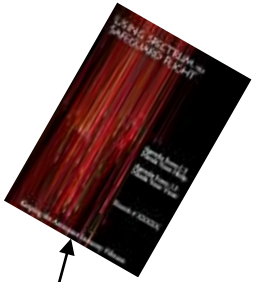
Beer & Pretzels

Tchotskis

Trained hosts

Brochure



Informants

AI 1.5 Economics

Technical literature

AI 1.5 Sharing Studies

Our video

# ICTS Booth Operations

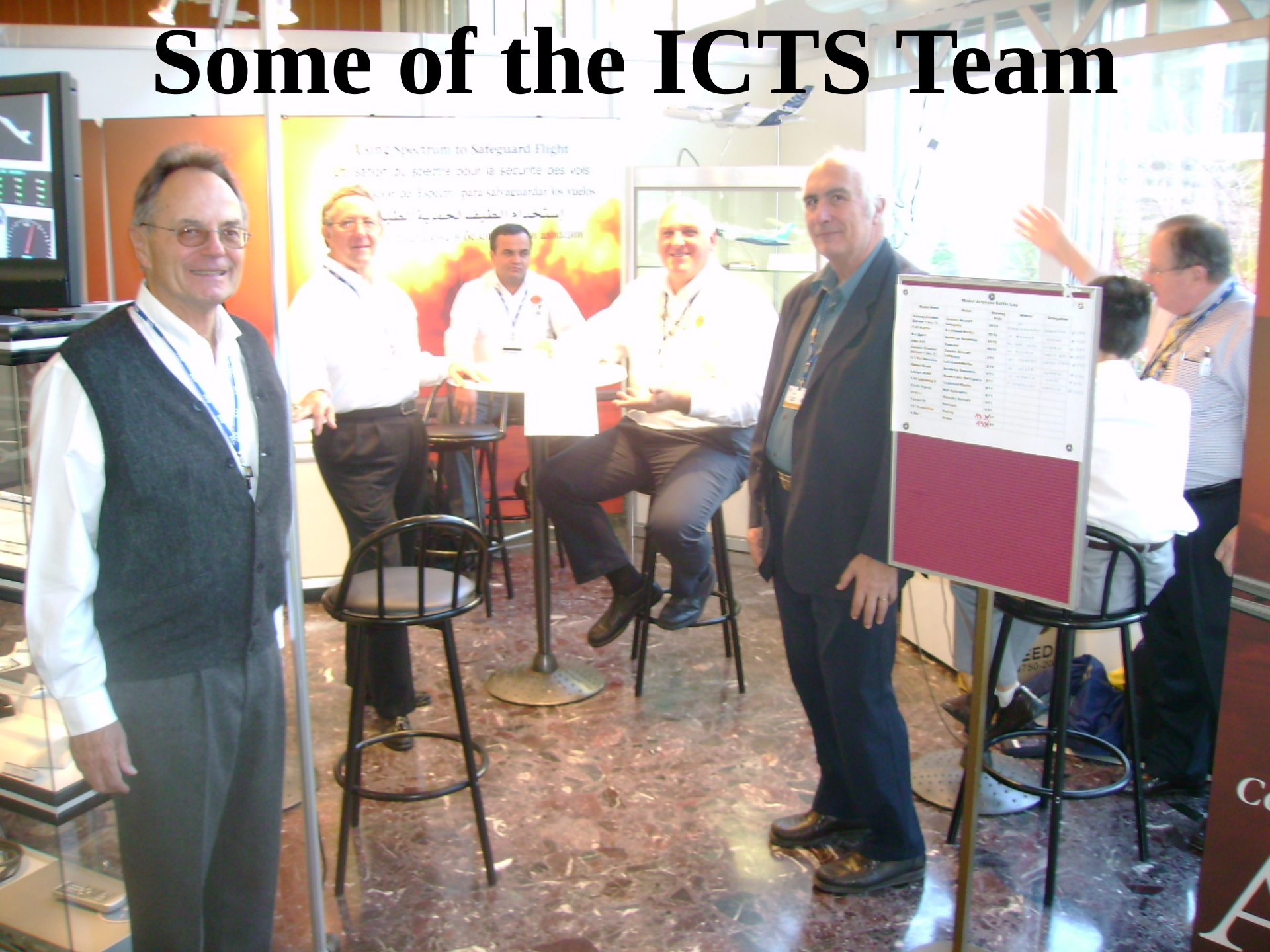
# 2016 International Telemetering Conference

## *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**

# 2016 International Telemetering Conference

# 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.)*

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## *"DOD Achieves Success at World Radiocommunication Conference 2007"*

### CHIPS Publication January - March 2008

*"• **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 Past Decade

- 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 Past Decade cont.

- 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?