IEC TC100 TV Power Project

An Overview
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**What is the IEC TV Power Project?**

- The International Electrotechnical Commission is (IEC) over 100 years old
  - 179 technical committees (TCs) and subcommittees (SCs)
  - 700 project teams / maintenance teams
  - Voting is by National Committee

- We are a Project within TC100 (Technical Committee - Multimedia Systems)
  - Initially an NP (New Project); Now an MT (Maintenance Team)

- IEC Document Number:
  - IEC 62087 Ed. 2 (Edition 2)

- Scope:
  - Standardize an improved method of measurement for TV On-mode power consumption

- Status:
  - CDV (5 month voting period) to start in November 2007
  - Formal publication forecast: August 2008
Meetings

- Jun 2005 NRDC
- Sep 2005 TC100
- May 2006 TV Power
- Jul 2006
- Sep 2006 IEC
- Nov 2006 TV Power
- Dec 2006 TV Power
- Jan 2007 TV Power
- Mar 2007 TV Power
- Oct 2007 TC100

Dec 2005 Project Leader volunteers
Feb 2006 NP authored to US TAG
Apr 2006 NP issued
Jul 2006 NP Approved
Sep 2006 1st video & test signals proposed
Jan 2007 Transition to MT
Feb 2007 2nd video proposed
Mar 2007 CD issued
Nov 2007 Updated draft complete CDV phase begins

Formal publication forecast: August 2008
Results as of the meeting in Colmar, France

- The Team completed the responses to 73 of 74 formal comments

- The Team completed the draft text on all topics, except meter accuracy & editorial items

- The Project Leader has all original video content – mostly in HD
  - We plan 50 & 60 Hz versions
  - We plan DVD, HD DVD & BD versions
  - The new versions will support public power demos

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Normative references:
- Reference six discs
  - 50 & 60 Hz DVD™
  - 50 & 60 Hz HD DVD™
  - 50 & 60 Hz Blu-ray™ Discs

Definitions:
- Clearly define Luma’ and APL’ as in the “gamma corrected” domain
- Added various abbreviations, such as DVD™, HD DVD™, Blu-ray™ Disc

Measurement equipment
- Working to define meter (or measurement) accuracy
- Meter is traceable to a national or international standard
- Clause 6: On (play) mode – maintained for backward compatibility
- Clause 10: Multi-function equipment – maintained for backward compatibility
  - Has been editorially “cleaned up”
  - Does not reference On (average) mode
  - Defines TV with Satellite tuner
  - Defines TV with VCR
  - Note: TV with Terrestrial tuner is just a TV
- Clause 11 (new): TV Power Measurement - On (average) mode
  - Terrestrial, Cable, & Satellite input terminals
    - levels more specifically defined
  - Environmental conditions
    - 23C +/- 5C for sub-clauses 11.5 & 11.6 (broadcast & Internet) only
Clause 11 (cont.):

- **Stabilization**
  - 11.5 (Static signals) remains compatible with JEITA
  - 11.6 & 11.7 (broadcast & Internet) are more tightly defined
    - Stabilize after 1 hour off or disconnected
    - Stabilize for at least one hour, but less than three hours
    - Durations can be reduced if the result is within 2% of full duration tests

- **Defined “Additional Functions”**
  - Additional functions are not related to the basic operation of the television set
  - They would include VCR, DVD player, HDD, etc
  - Additional functions to be turned Off
  - *Note that these functions might eliminate the need for an external product. Also, they could represent new innovations.*

- **Defined “Special Functions”**
  - Special functions are related to the operation of the television set.
  - They would include special sound processing, power saving features, etc
  - Additional functions to be “in the position adjusted by the manufacturer for shipment to the end user.”
Clause 11 (cont.):
- “Standard mode”
  - Defined as “recommended by the manufacturer for normal home use.”

- Video format
  - Frame rate “should match the frame rate most commonly used in the region.”
  - HD source should be used with HD-capable inputs
  - Additional functions to be turned Off
  - Note that these functions might eliminate the need for an external product. Also, they could represent new innovations.

- Defined core measurement and power saving measurements normatively
  - 11.6.1 \( P_{o\_broadcast} \) (W)
  - 11.6.2 \( P_{a1\_broadcast} \) (W) = \( P_{o\_broadcast} \) (W) – \( P_{abc\_broadcast} \) (W)
  - 11.6.3 \( P_{a2\_broadcast} \) (W) = \( P_{o\_broadcast} \) (W) – \( P_{other\_broadcast} \) (W)
Next Steps

- Team to complete meter accuracy definition
- Team to deliver formal responses and request CDV (5 month vote) in early November
- Project leader to work with IEC regarding how to publish the video discs
- Project leader to continue to support EPA’s specification development effort

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The IEC TV Power Project is standardizing average on-mode TV power measurement.

- Formal publication in August, 2008
- Video availability is the biggest unknown and the next top priority
- Team has worked hard to achieve broad support using a consensus model