IVI Keynote, Part 2

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IVI Generations – Background

- IVI Standards were first approved in 2002

- In 2011, IVI Technical Committee (IVI TC) received feedback from some customers regarding shortcomings in IVI drivers

- IVI TC representatives met with the customers in 2012

- IVI TC identified a set of areas in which IVI drivers were sometimes deficient

- In response, the IVI TC decided to add new requirements to the specifications

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IVI Generations – Concept

- The new requirements could not be met by the existing IVI drivers

- IVI TC did not want to invalidate the existing IVI drivers

- So, IVI TC created the concept of "IVI Generations" named as "IVI-*yyyy*", where *yyyy* is year after the year in which the new generation is approved

- The original generation is now called IVI-2013, and the new one is IVI-2014

  – Driver's compliance document indicates the generation

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IVI-2014 – Intro Document

- Drivers are now required to ship with a brief introductory document containing information such as
  - How to find the full set of driver documentation
  - How to find the driver source code and examples
  - How to get started using the driver in different development environments
  - How to configure settings
- IVI Foundation makes an sample introductory document available to drivers developers

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IVI-2014 – Source Code

- IVI-2014 drivers for message-based devices are required to ship with
  - Source code
  - Ability (e.g., project files) to rebuild the driver in the development environment in which the driver was created

IVI-2014 – Rules for Message-Based (e.g., SCPI) Drivers

- Must ship with source code and ability to rebuild the driver
  - In the programming language in which the driver was created
- Must include "Direct I/O" methods, with standardized interfaces, to send commands directly to the instrument
  - Leverages the I/O session the driver is using
- For each function and attribute, must document the underlying command(s) used

IVI-2014 – Attributes

- Requires that all instrument parameters available through the high-level configuration functions also be available as individual attributes (properties)
  - Many or most IVI drivers already did this, but it was not a requirement in the specifications

IVI-2014 – Testing

- All entry points must be tested with parameter values that exercise, for each setting
  - The Valid ranges
  - Out-of-range values
- Driver compliance document must specify the test setups that were used

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IVI TC Activity

- IVI.NET
  - Specifications already approved
  - Making some adjustments, primarily in terms of versioning and installation
- VISA.NET
  - Initial specification

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