

Function Discovery

Greg LeClair

IEEE 1212 Function Discovery Task Group

EPSON Imaging Technology Center

Overview

- Background
- Current Ideas
- Requirements
- Discussion
- Questions

Background

- Began work in Printer Working Group for device discovery
- Unit directories define how to talk to unit.
- A solution is needed for ‘What is it?’
 - Some OS implementations want to know what the device is and load the entire ‘I/O driver software’ stack.

Background

- Issues:
 - Maintain Legacy Device ID from IEEE Std.1284-1994 for printers
 - Simple neutral method of identifying node.
 - Peripherals may support multiple command languages and / or protocols.
 - Printer may actually be software on host machine which is bridging legacy port device.

Current Ideas

- DDSr proposal by Canon was basis for PAR which was discussed at IEEE MSC meeting
 - see <http://www.pwg.org/p1394>
- IEEE MSC meeting results:
 - If module / node information currently defined in IEEE Std. 1212-1991 could be improved, then it would be better to add it to the 1212 reaffirmation rather than start a different WG.

Requirements

- Make device function information available in a consistent way.
 - ASCII Strings
 - Binary values
- Should coexist with other types of info:
 - See other proposals... (SONY, HP)

Discussion

- Dependent_Info keys:
 - Module_ , Node_ , Unit_
 - Are they the right place to put this kind of info?
- Dependent_Info keys are optional and vendor dependent.
 - They can also be standardized.

Questions

- Dependent_Info keys:
 - Should the requirement of the Dependent_Info keys be changed in IEEE 1212 or suggested usage simply added as an informative annex?
- Dependent_Info key points to a directory.
 - Each entry is either an immediate value or an offset to a another entry

Device ID String

- [MFR]Manufacturer [MDL] Model number
[CLS] - Class of device [DES] - Description
 - Formatted as one ASCII string
 - New keys can be added

Unit Architectures

Dependent_Info	Module_	Node_	Unit_
Printer as Product	Device ID	← Same	← Same
Printer as Function MFP, Spooler, ...	Host ID Device1 ID Device2 ID Device'n' ID	← Same	Device'n' ID