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INFORMATION TECHNOLOGY – UPNP DEVICE ARCHITECTURE –

Part 16-10: Low Power Device Control Protocol – Low Power Proxy Service

FOREWORD

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International Standard ISO/IEC 29341-16-10 was prepared by UPnP Forum Steering committee[1], was adopted, under the fast track procedure, by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

The list of all currently available parts of the ISO/IEC 29341 series, under the general title *Information technology – UPnP device architecture*, can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

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1 UPnP Forum Steering committee, UPnP Forum, 3855 SW 153rd Drive, Beaverton, Oregon 97006 USA. See also “Introduction”.

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1 Overview and Scope

This service definition is compliant with the UPnP Device Architecture version 1.0. [DEVICE10]

This service-type enables modeling of “Basic Power Management Proxy” function capabilities. Basic Power Management Proxy (BPMPX) is a combination of UPnP service and a control point. As Control Point, Proxy discovers and controls Low Power Device services running in the network, and as UPnP Proxy service, it advertises itself to the network, and responds to actions from low power aware Control Point. [LPARCH] Basic functions that BPMPX does are as follows:

- Receive multicast discovery messages from power managed UPnP devices in order to be aware of their power states (i.e. the BPMPX will act as Control Point).
- Send multicast or unicast discovery messages (i.e. M-SEARCH) to query UPnP devices and keep track of their power states (i.e. the BPMPX will act as Control Point).
- Send GetPowerManagementInfo action to obtain power management mechanism provided by power-aware devices.
- Should send the appropriate wakeup message to the specified sleeping device when it receives WakeupDevice action from power aware Control Point. [LPARCH]
- Act as UPnP service
  - Sending BPMPX service announcements and M-Search replies.
  - Respond to SearchSleepingDevices action to provide the information of sleeping devices in network.
  - Respond to Wakeup action from Control Point. (Wake up action is directed to the low power devices and not for waking up the BPMPX)

1.1 Referenced Specifications

Unless stated otherwise herein, implementation of the mandatory provisions of any standard referenced by this specification shall be mandatory for compliance with this specification.

1.1.1 Normative References

This clause lists the normative references used in this document and includes the tag inside square brackets that is used for each sub reference:

[DEVICE10] UPnP Device Architecture, version 1.0.

[XML10] Extensible Markup Language (XML) 1.0 (Second Edition), T. Bray, J.Paoli, C. M. Sperberg-McQueen, E Maler, eds. W3C Recommendations, 6 October 2000.

[LPDEV1] LowPowerDevice:1 Mika Saaranen, Jose Costa-Requena, Shailendra Sinha, Ujwal Paidipathi, Yin-Ling Liong, Yinghua Ye, and Bruce Fairman, etc.

1.1.2 Informative References

This clause lists the informative references used in this document and includes the tag inside square brackets that is used for each sub reference:

[LPARCH] UPnP Low Power Architecture. Ujwal Paidipathi, Jose Costa-Requena, Shailendra Sinha, Yin-Ling Liong, Yinghua Ye, Bruce Fairman, etc.