

HF-Standard Changes (2017-12-18)

ULE Alliance Report

Home Area Network-Functionality (HAN-FUN); Standard Changes



Keywords

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Contents

1	Overview	5
2	Standard changes from v1.0.0 to v1.1.0	5
2.1	HF-Service document	5
2.1.1	Documentation	5
2.1.2	New Features	5
2.1.3	Bug Fixes	6
2.2	HF-Interface document	7
2.2.1	Documentation	7
2.2.2	New Features	7
2.2.3	Bug Fixes	7
2.3	HF-Protocol document	7
2.3.1	Documentation	7
2.3.2	New Features	7
2.3.3	Bug Fixes	8
2.4	HF-Profile document	8
2.4.1	Documentation	8
2.4.2	New Features	8
2.4.3	Bug Fixes	8
2.5	HF-Overview document	8
2.5.1	Documentation	8
2.5.2	New Features	9
2.5.3	Bug Fixes	9
2.6	HF-ULE_Interworking document	9
2.6.1	Documentation	9
2.6.2	New Features	9
2.6.3	Bug Fixes	9
3	Standard changes from v1.1.0 to v1.2.0	10
3.1	HF-Service document	10
3.1.1	Documentation	10
3.1.2	New Features	10
3.1.3	Bug Fixes	10
3.2	HF-Interface document	10
3.2.1	Documentation	10
3.2.2	New Features	10
3.2.3	Bug Fixes	10
3.3	HF-Protocol document	10
3.3.1	Documentation	10
3.3.2	New Features	10
3.3.3	Bug Fixes	10
3.4	HF-Profile document	10
3.4.1	Documentation	10
3.4.2	New Features	11
3.4.3	Bug Fixes	11
3.5	HF-Overview document	11
3.5.1	Documentation	11
3.5.2	New Features	11
3.5.3	Bug Fixes	11
3.6	HF-ULE_Interworking document	11
3.6.1	Documentation	11
3.6.2	New Features	11
3.6.3	Bug Fixes	11
4	Standard changes from v1.2.0 to v1.3.0	12
4.1	HF-Service document	12
4.1.1	Documentation	12
4.1.2	New Features	12
4.1.3	Bug Fixes	12

4.2	HF-Interface document	12
4.2.1	Documentation	12
4.2.2	New Features.....	12
4.2.3	Bug Fixes	12
4.3	HF-Protocol document.....	12
4.3.1	Documentation	12
4.3.2	New Features.....	13
4.3.3	Bug Fixes	13
4.4	HF-Profile document	13
4.4.1	Documentation	13
4.4.2	New Features.....	13
4.4.3	Bug Fixes	13
4.5	HF-Overview document	13
4.5.1	Documentation	13
4.5.2	New Features.....	13
4.5.3	Bug Fixes	13
4.6	HF-ULE_Interworking document.....	13
4.6.1	Documentation	13
4.6.2	New Features.....	14
4.6.3	Bug Fixes	14
5	Standard changes from v1.3.0 to v1.4.0.....	15
5.1	HF-Service document	15
5.1.1	Documentation	15
5.1.2	New Features.....	15
5.1.3	Bug Fixes	15
5.2	HF-Interface document.....	15
5.2.1	Documentation	15
5.2.2	New Features.....	15
5.2.3	Bug Fixes	15
5.3	HF-Protocol document.....	15
5.3.1	Documentation	15
5.3.2	New Features.....	15
5.3.3	Bug Fixes	16
5.4	HF-Profile document	16
5.4.1	Documentation	16
5.4.2	New Features.....	16
5.4.3	Bug Fixes	16
5.5	HF-Overview document	16
5.5.1	Documentation	16
5.5.2	New Features.....	16
5.5.3	Bug Fixes	16
5.6	HF-ULE Interworking document.....	16
5.6.1	Documentation	16
5.6.2	New Features.....	16
5.6.3	Bug Fixes	16

1 Overview

This document lists all changes made to the HAN-FUN documentation. Only listed changes were considered for a new release.

Changes are listed per document and subdivided into 3 categories:

- **Documentation:** These are changes that are either bug fixes or clarifications that should not impact the standard nor existing implementations.
- **New Features:** These are changes that introduce new behaviours and/or modify existing ones that may impact existing implementations.
- **Bug Fixes:** These are fixes that may impact existing implementations.

2 Standard changes from v1.0.0 to v1.1.0

The listed changes are time-stamped with the date at which they were introduced into the documents release v1.1.0.

2.1 HF-Service document

2.1.1 Documentation

- a) [2014-01-24] Removed template link that caused people to not be able to open the document (Bug fix)
- b) [2014-01-24] Change statement of MAC-48 size from 12 to 6 bytes (Bug fix)
- c) [2014-01-24] Fixed some typos (Bug fix)
- d) [2014-01-24] Fix 1st statement of De-register command's paragraph (Clarification)
- e) [2014-01-24] Rename Discriminator Type to Discriminator Present (also implies changing the name of its values) (Clarification)
- f) [2014-01-24] Re-phase section 6.1.5.1.1 Discriminator Present (Clarification)
- g) [2014-11-21] Rephrase descriptions of attributes in Device Information Service. Change "option" for "certainty" (Clarification)
- h) [2014-11-21] Minor Rephrase in section 6.2.1 to avoid interpretation collisions with other sections (Clarification)
- i) [2014-05-19] Rearranged 2 rows on Table 22 (Information stored in each bind entry) to improve readability (Clarification)
- j) [2014-08-27] Clarify usage of special Report ID value (0x7F) (Clarification)
- k) [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document (Bug fix)
- l) [2014-10-20] Corrected maximum value of possible devices in Device Management Number of Entries attribute. Also affects start session read and get entries commands (Bug fix)
- m) [2014-12-11] Fix wrong cross-references in sections 5.1.2.1 and 5.2.2.1 (Bug fix)
- n) [2014-12-15] Don't allow table rows to split between pages (New feature)

2.1.2 New Features

- a) [2014-02-04] Change Periodic Interval Value to a U32 value and remove the field that specified its size
 - This change makes the value definition more concise, realistic and better for support from embedded devices, since the previous definition allowed for really big memory abuses and added unnecessary code complexity.
- b) [2014-05-19] Add Response Code - 0x03 - Fail: Not supported - to all optional commands that mandate a response. Affects Bind, Attribute Reporting
 - This change introduces a clear response code for non-implemented commands, so that any device knows how to handle the situation.
- c) [2014-11-21] Add Response Code - 0x03 - Fail: Not supported - to all mandatory commands in Attribute Reporting service. Also state that a profile may overwrite this response by dictating that the command is really mandatory.

- This change allows devices to support only certain pieces of this service so to better accommodate intended functionality with their available resources.
- d) [2014-11-21] Change Bind Management service for Concentrator from mandatory to optional
 - This change is for certification alignment
- e) [2014-11-24] Make all commands in Device Management Service optional for devices, except Register command.
 - This change allows low resource devices to be able to implement HAN-FUN and pass certification.
- f) [2014-11-24] Make all commands in Device Management Service optional for Concentrator, except Register and De-Register commands.
 - This change is for certification alignment
- g) [2014-12-15] Make “Start Session Read Bind Info” (6.2.5.7), “End Session Read Bind Info” (6.2.5.8) and “Get Bind Entries by Index” (6.2.5.9) optional for the Client role.
 - To have only a minimum functionality when this service is implemented.
- h) [2014-12-22] Update all device/interface/unit value ranges to reflect the new change of reserving a special value from each type. Reserved values: Device Address 0x7FFF, Unit Id 0xFF and Interface UID 0x7FFF. Affects Device Management, Bind and Attribute Reporting services.
 -
- i) [2014-12-22] Make Bind able to match any device, interface or unit with the newly reserved values;
 - The ability to match any device/interface/unit is useful for some products.

2.1.3 Bug Fixes

- a) [2014-01-24] Add EMC to Device Management Table (Affects DM service)
 - This fix makes EMC of a registered device available to the network, which is required so devices know how to address each other, especially with proprietary interfaces. Specifically affects the Get Entries command.
- b) [2014-03-25] Consistently use 0x02 - Fail: Invalid argument response code value (affects Group Management)
 - This fix avoids wrong usage of some response codes.
- c) [2014-11-21] State Bind rules are only valid for commands; set/get requests are NOT checked by bind.
 - This fix aligns Bind behaviour with its original intention.
- d) [2014-11-21] State that the Register command is sent from D’7FFF:U’0 to D’0:U’0 (Affects DM service)
 - This is for clarification since there is currently no indication of what address a device should use when it does not have an HF address yet.
- e) [2014-11-21] Change the unit type used by D’0:U’0 when registering optional profiles from 0xFFFF to 0x0000. Affects section 5.1.1.1.
 - Address 0xFFFF is already reserved for proprietary profiles so it is better to reserve 0x0000 for D’0:U’0 instead.
- f) [2014-11-21] Add meaning to Battery Status values in Power interface.
 - Currently only defined the values but not their meaning.
- g) [2014-11-25] Change Device Address status in the response to the Register command from optional to mandatory.
 - This is to avoid interpretations that implementations may freely choose when to send this field. As currently stated, it may only not be sent when registration fails.
- h) [2014-12-04] Remove special Report ID value 0x7F from Get Periodic Report Entries (6.6.5.6) and Get Event Report Entries (6.6.5.7) commands.
 - These commands are only able to send one report.
- i) [2014-12-04] Correct information sent in responses to, Get Periodic Report Entries (6.6.5.6) and Get Event Report Entries (6.6.5.7) commands.
 - These responses had duplicated information
- j) [2014-12-11] State that bind tables and acceptance of messages to the special D’7FFF:U’FF is mandatory to a Concentrator.
 - This avoids misinterpretations in a fundamental standard feature.
- k) [2014-12-11] Add missing field (0x08) to device information service
 - Simple fix
- l) [2014-12-15] Add a note to optional commands that only make sense together, that if one is implemented the other must be also. Affects “Get Entries” commands in Device and Bind Management services.
 - Improves standard coherency.

- m) [2014-12-17] Specify what value should appear in the three mandatory version attributes from Device Information service.
 - Improve clarity.
- n) [2015-02-03] Revert wrong change in table 114.

2.2 HF-Interface document

2.2.1 Documentation

- a) [2014-01-24] Removed template link that caused people to not be able to open the document (Bug fix)
- b) [2014-02-11] Fix incorrect footnote on Simple Power Metering Server attributes table (Bug fix)
- c) [2014-08-27] Fixed wrong diagram for Off command in Interface document section (Bug fix)
- d) [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document (Bug fix)
- e) [2014-12-15] Don't allow table rows to split between pages (New feature)

2.2.2 New Features

- a) [2014-04-09] Make Level Control interface attribute - Current Level - Read/Write instead of Read Only
 - Changed originally introduced to avoid usage confusion as reported by some clients. Currently this change is maintained for flexibility, allowing this attribute to be modified also by the general SET command.
- b) [2014-11-24] Make Level Control interface command - Set Level - optional
 - This change is to support the flexibility introduced in a).
- c) [2014-12-22] Reserve the interface UID 0x7FFF so it can be used to match any interface
 - The ability to match any interface ID is useful for some services.

2.2.3 Bug Fixes

- a) [2014-11-24] Fixed wrong values for reserved interface UID, this field has 15 bits and not 16 (Affects proprietary interfaces)
 - Critical fix since it causes invalid use of interface type bit which breaks standard concepts of client-server roles.
- b) [2014-02-11] Associate the obligation of implementing Report Interval attribute to that of the Report command
 - One does not make much sense without the other; furthermore attribute reporting can be used instead.

2.3 HF-Protocol document

2.3.1 Documentation

- a) [2014-01-24] Removed template link that caused people to not be able to open the document (Bug fix)
- b) [2014-02-06] Change the Pack request examples (on table 7) to meaningful examples based on what is possible with the protocol at the moment (Clarification)
- c) [2014-02-11] Clarify that Set Pack Requests can only be used with the 0xFF - Dynamic pack ID (Bug fix)
- d) [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document (Bug Fix)
- e) [2014-12-15] Don't allow table rows to split between pages (New feature)

2.3.2 New Features

- a) [2014-12-22] Reserve the Unit ID 0xFF so it can be used to match any unit in a device
 - The ability to match any unit ID is useful for some services.
- b) [2014-12-22] Reserve the device address 0x7FFF so it can be used to match any device

- The ability to match any device is useful for some services.

2.3.3 Bug Fixes

- [2014-11-21] Remove global response code: *0x23: Fail: Inexistent ID or rule* (Bind and Group services are affected)
 - The only places where it is used cause a response to be sent when it simply shouldn't.
- [2014-02-04] Clarify that mandatory responses are always sent independently of the request type, affects message types 0x01, 0x02 and 0x03
 - This makes sure everyone understands that mandatory responses always need to be handled.
- [2014-02-11] Explain behaviour of Set Pack requests when a wrong or non-implement attribute ID is received
 - No explanation existed on how to properly handle this situation, as a device not implementing an optional attribute will not know how to parse it.
- [2014-11-21] State that Application Reference field is also used to match responses to requests and not only to avoid duplication.
 - This fix aligns protocol messages behaviour with its original intention.
- [2014-11-21] State in all response message types that the Application Reference field of the response needs to be the same that was in the request.
 - This change is required due to d) fix.
- [2014-12-11] State that bind tables and acceptance of messages to the special D'7FFF:U'FF is mandatory to a Concentrator.
 - This avoids misinterpretations in a fundamental standard feature.

2.4 HF-Profile document

2.4.1 Documentation

- [2014-01-24] Removed template link that caused people to not be able to open the document (Bug fix)
- [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document (Bug fix)
- [2014-12-15] Don't allow table rows to split between pages (New feature)

2.4.2 New Features

- [2014-08-14] Add a new profile: Alertable
 - Introduced since there wasn't a single profile defined to receive alerts.
- [2014-12-22] Reserve the Unit ID 0xFF so it can be used to match any unit in a device
 - The ability to match any unit ID is useful for some services.

2.4.3 Bug Fixes

- [2014-08-14] Fix Dimmer Switch interface roles (switched from Server to Client)
 - Critical bug fix, v1.0.0 incorrectly defines the proposed profile functionality.

2.5 HF-Overview document

2.5.1 Documentation

- [2014-01-24] Removed template link that caused people to not be able to open the document
- [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document
- [2014-12-15] Don't allow table rows to split between pages (New feature)

2.5.2 New Features

None.

2.5.3 Bug Fixes

None.

2.6 HF-ULE_Interworking document

2.6.1 Documentation

- a) [2014-10-07] Fixed wrong link to the ETSI EN 300 175-1 referenced document
- b) [2014-12-15] Don't allow table rows to split between pages (New feature)

2.6.2 New Features

None.

2.6.3 Bug Fixes

- a) [2014-12-11] Replace wrong figure 4 with correct one
 - Simple fix.

3 Standard changes from v1.1.0 to v1.2.0

The listed changes are time-stamped with the date at which they were introduced into the documents release v1.2.0.

3.1 HF-Service document

3.1.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.

3.1.2 New Features

- a) [2015-04-17] Add new services and respective interfaces: SUOTA and RSSI.
- b) [2015-05-04] Mandate implementation of 3 Device Information attributes for devices implementing the client role of SUOTA service.
- c) [2015-05-20] In Attribute Reporting Service change responses to Create Periodic/Event Report commands so that in case of failure only the Response Code field is mandatory.

3.1.3 Bug Fixes

None.

3.2 HF-Interface document

3.2.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.
- b) [2015-03-04] Remove any XML related information since it is useless and outdated.

3.2.2 New Features

- a) [2015-02-03] Add new interfaces: Simple Temperature and Simple Humidity

3.2.3 Bug Fixes

None.

3.3 HF-Protocol document

3.3.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.

3.3.2 New Features

- a) [2015-04-17] Add *0x02 - Fail: Invalid Argument* response code to all Set attribute commands.

3.3.3 Bug Fixes

None.

3.4 HF-Profile document

3.4.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.

3.4.2 New Features

- a) [2015-02-03] Add two new profiles: Simple Temperature Sensor and Simple Humidity Sensor.
- b) [2015-05-04] Add Attribute Reporting minimum requisites to all profiles implementing On-Off interface as the server role.

3.4.3 Bug Fixes

- a) [2015-05-04] Add new services to table 2.

3.5 HF-Overview document

3.5.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.

3.5.2 New Features

None.

3.5.3 Bug Fixes

None.

3.6 HF-ULE_Interworking document

3.6.1 Documentation

- a) [2015-02-27] Remove history section since a separate document (this one) exists for that.
- b) [2015-03-03] Add Terms and Conditions of Use annex

3.6.2 New Features

- a) [2015-02-27] Add section to describe the SUOTA procedure used by ULE.

3.6.3 Bug Fixes

- a) [2015-03-26] Replace wrong figures 1, 2 and 5 with correct ones
 - Simple fix

4 Standard changes from v1.2.0 to v1.3.0

The listed changes are time-stamped with the date at which they were introduced into the documents that constitute the HF Release with version 1.3.0.

[2016-03-23] From RC4 onward, all PDF are generated with bookmarks enabled.

4.1 HF-Service document

4.1.1 Documentation

- a) [2016-01-04] A unit type and a profile are the same thing, therefore to avoid further misunderstandings the wording “unit type” is replaced by “profile” in the entire document.
- b) [2016-01-05] Add the HF-ULE-Interworking document as a reference in the Foreword section

4.1.2 New Features

- a) [2015-12-14] Add new services and respective interfaces: Batch Program Management (0x0007), Event Scheduling (0x0008) and Weekly Scheduling (0x0009).
- b) [2016-02-24] Add new battery types (attribute 0x09) in Power Service.

4.1.3 Bug Fixes

None.

4.2 HF-Interface document

4.2.1 Documentation

- a) [2015-12-14] Remove obsolete paragraph from “Custom Manufacturer Interfaces” section with link to the already removed XML information.
- b) [2016-01-04] A unit type and a profile are the same thing, therefore to avoid further misunderstandings the wording “unit type” is replaced by “profile” in the entire document.
- c) [2016-01-05] Add the HF-ULE-Interworking document as a reference in the Foreword section.
- d) [2016-03-23] Add clarification to attribute Power Factor (5.1.1.10) of Simple Power Metering Interface (5.4).

4.2.2 New Features

- a) [2015-12-14] Add four interfaces: Simple Thermostat (0x0303), Simple Button (0x0304), Simple Visual Control (0x0305) and Air Pressure (0x0306)
 - [2016-03-23] Change Simple Thermostat client to server commands Boost Start (5.7.4.1) and Boost Stop (5.7.4.2) to not mandate a response (Affects table 20 and some paragraphs).

4.2.3 Bug Fixes

- a) [2015-12-14] Correct Attribute Access of Simple Temperature and Simple Humidity Interfaces.

4.3 HF-Protocol document

4.3.1 Documentation

- a) [2016-01-04] A unit type and a profile are the same thing, therefore to avoid further misunderstandings the wording “unit type” is replaced by “profile” in the entire document.
- b) [2016-01-04] Add the HF-ULE-Interworking document as a reference in the Foreword section.
- c) [2016-01-05] Clarify the support requirements of protocol message types by both standard and proprietary interfaces.

- d) [2016-01-05] Clarify that “failure” in Get/Set attribute requests also covers non-implemented optional attributes.
- e) [2016-01-05] Update Table of Contents to remove obsolete entries.

4.3.2 New Features

None.

4.3.3 Bug Fixes

- a) [2016-01-05] Specify the behaviour of a *Response to a Get Attribute Request* (6.3.2.5) when a non-implemented optional attribute is requested.

4.4 HF-Profile document

4.4.1 Documentation

- a) [2015-12-14] Adjust some text formatting.
- b) [2016-01-04] Add the HF-ULE-Interworking document as a reference in the Foreword section.
- c) [2016-01-04] Fix and clarify introduction paragraphs. A profile was defined as a collection of unit types, which is incorrect. A unit type and a profile are the same thing, therefore to avoid further misunderstandings the wording “unit type” is replaced by “profile” in the entire document.

4.4.2 New Features

- a) [2015-12-14] Add six new profiles: Simple Air Pressure Sensor (0x0110), Simple Button (0x0111), Controllable Thermostat (0x0112), Simple Led (0x0113), Environment Monitor (0x0114) and UI Lock (0x0401).

4.4.3 Bug Fixes

None.

4.5 HF-Overview document

4.5.1 Documentation

- a) [2016-01-04] Update Table of Contents to remove obsolete entries.
- b) [2016-01-04] Add a new chapter with a table containing the individual document versions for the current release.
- c) [2016-01-04] Add the HF-ULE-Interworking document as an official part of the standard (added to both the Foreword as well as main chapter).

4.5.2 New Features

None.

4.5.3 Bug Fixes

None.

4.6 HF-ULE_Interworking document

4.6.1 Documentation

- a) [2016-01-04] Update Table of Contents to remove obsolete entries.

4.6.2 New Features

None.

4.6.3 Bug Fixes

None.

5 Standard changes from v1.3.0 to v1.4.0

The listed changes are time-stamped with the date at which they were introduced into the documents that constitute the HF Release with version 1.4.0.

5.1 HF-Service document

5.1.1 Documentation

- a) [2017-06-09] General re-format for better consistency.

5.1.2 New Features

- a) [2017-06-09] Added Update Periodic Report Interval to the Attribute Reporting Interface (CR #0007)
- b) [2017-06-09] Added Group Table interface.(CR #0016)
- c) [2017-06-09] Bump Major version to 2. (CR #0018)
- d) [2017-06-09] Remove dependency of Core Version attribute in Device Information on the Protocol document version. (CR #0018)
- e) [2017-06-09] Added requirement that a device re-register after SOUTA to update HF concentrator information. (CR #0019)

5.1.3 Bug Fixes

- a) [2017-06-09] Fixed SOUTA interface URL length inconsistency. (CR #0012)

5.2 HF-Interface document

5.2.1 Documentation

- a) [2017-06-09] General re-format for better consistency.

5.2.2 New Features

- a) [2017-06-09] Added Colour interface. (CR #0006)
- b) [2017-06-09] Added Increase/Decrease Level commands to the Level Control interface. (CR #0008)
- c) [2017-06-09] Changed Simple Button Interface to allow setting the different duration times to 0 to indicate the event will never be generated. (CR #0011)
- d) [2017-06-09] Added Simple Light Sensor interface. (CR #0013)
- e) [2017-06-09] Change ON-OFF interface client commands conditionally mandatory. (CR #0014)

5.2.3 Bug Fixes

None.

5.3 HF-Protocol document

5.3.1 Documentation

- a) [2017-06-09] General re-format for better consistency.

5.3.2 New Features

None.

5.3.3 Bug Fixes

None.

5.4 HF-Profile document

5.4.1 Documentation

- a) [2017-06-09] General re-format for better consistency.

5.4.2 New Features

- a) [2017-06-09] Added Colour Bulb profile. (CR #0006)
- b) [2017-06-09] Added Dimmable Colour Bulb profile. (CR #0006)
- c) [2017-06-09] Added Simple Light Sensor profile. (CR #0013)
- d) [2017-06-09] Added Tracker profile. (CR #0017)
- e) [2017-06-26] Added Simple Keypad profile. (CR #0021)

5.4.3 Bug Fixes

None.

5.5 HF-Overview document

5.5.1 Documentation

- a) [2017-06-09] General re-format for better consistency.

5.5.2 New Features

- a) [2017-06-09] Bump document versions.

5.5.3 Bug Fixes

None.

5.6 HF-ULE Interworking document

5.6.1 Documentation

- a) [2017-06-09] General re-format for better consistency.
- b) [2017-06-09] Use FP and PP consistently thru out the document.
- c) [2017-06-09] Bump version to 2.0.0.
- d) [2017-06-26] Update DECT ULE standard ETSI TS 102 939-1 to ETSI TS 102 939-2.

5.6.2 New Features

- a) [2017-06-09] Added delayed de-registration of PP (CR #0005)
- b) [2017-06-09] Bump Service Call version to 2. (CR #0018)
- c) [2017-06-09] Added requirement that a device re-register after SOUTA to update device capabilities. (CR #0019)
- d) [2017-06-09] Added support for multicast devices (CR #0020)

5.6.3 Bug Fixes

None.

Annex:

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