Broadband User Services

User Services Platform

Project Stream Page: User Services Platform Project Stream

Project Stream Leads:Chen Li (AT&T) and Tim Spets (Nokia)

Description: The project stream handles the development, maintenance, and updating of the User Services Platform.

Project	Title	Description	Resources	Editors
WT-369	The User Services Platform	This document describes the architecture, protocol, and data model that builds an intelligent User Service Platform. It is targeted towards application developers, application service providers, CPE vendors, consumer electronics manufacturers, and broadband and mobile network providers who want to expand the value of the end users network connection and their connected devices. The Data Model Schema and Data Model Objects for USP are developed in the BUS Data Modeling Project Stream (below).	Specification Bitbucket Kanban Board	TBD
WT-479	Framework for USP-Enabled DOCSIS Devices	Show how USP (TR-369) plus DOCSIS provisioning could do for Cable what TR-142 did for PON in terms of separating physical layer provisioning from higher "service" layer device management.	Kanban Board	John Blackford (CommScope)

CWMP

Project Stream Page: CWMP Project Stream

Project Stream Leads: None

Description: This project stream manages the development, maintenance, and updating of the CPE WAN Management Protocol, commonly known as TR-069.

Work Area Overview

Mission Statement:

The Broadband User Services Work Area provides the broadband industry with technical specifications, implementation guides, reference implementations, test plans, and marketing white papers for the deployment, management, and consumption of services by the broadband end user.

Work Area Directors:

- John Blackford, CommScope
- Jason Walls, QA Cafe

Business Impact:

The Broadband User Services Work Area develops specifications and publications to create a new kind of the Broadband experience for the end user and provides new means for service providers and application developers to monetize the broadband user's connection. This ranges from managed Wi-Fi, IoT or smart home services, broadband and in-home performance management, and more - all of which open up large markets and profitable business models.

Scope:

- Develop and evolve the TR-069 CPE WAN Management Protocol and the User Service Platform (USP) to

Project	Title	Description	Resources	Editors
Nothing being worked on at this time				

BUS Data Modeling

Project Stream Page: BUS Data Modeling Project Stream

Project Stream Leads: Matthieu Anne (Orange) and Daniel Egger (Axiros)

Description: This project stream develops the data model objects to manage connected devices using the CPE WAN Management Protocol and/or the User Services Platform. In addition it defines the data model schema and the necessary tool support.

Project	Title	Description	Resources	Editors
WT-181 (DEV2DM)	WT-181: Device Data Model	WT-181 Issue 2 defines version 2 of the Device Data Model (Device:2) for TR-069 Endpoints and USP Agents. This includes an overview document and XML files that model interfaces, systems, and services in connected devices. WT-181 Issue 2 Amendment 14 is currently in progress.	Document Bitbucket Kanban Board	TBD

cover existing use cases, machine-to-machine/IoT use cases, and the virtualization of broadband user services
- Develop and specify new information models to broaden the range of for which TR-069 and USP can be used
- Develop requirements for broadband user devices and associated software
- Develop test plans and training programs for Work Area protocols and requirements
- Develop marketing white papers that supplement Work Area protocols and requirements

Email Lists:

- BUS Work Area (WA): bus@broadband-forum.org
- USP Project Stream (PS): usp@broadband-forum.org

Join or Leave BBF Groups and Email Lists

BUS Calls, Minutes, Agendas
Teleconference Meetings

Interim Conference Calls (BUS WA)

Quarterly Meeting Minutes (BUS WA)

WT-106 (DMSUPP)	WT-106: Data Model Template for CWMP Endpoints and USP Agents	WT-106 specifies data model guidelines to be followed by all CWMP Endpoints and USP Agents. These guidelines include structural requirements for the data hierarchy, requirements for versioning of data models, and requirements for defining profiles. In addition, WT-106 defines an XML Schema (the DM Schema) that as far as possible embodies these guidelines, and which is used for defining all CWMP and USP data models. This makes data model definitions rigorous, and helps to reduce the danger that different implementations will interpret data model definitions in different ways. WT-106 also defines an XML Schema (the DT Schema) that allows a device to describe its supported data model. This description is both specific and detailed, allowing a Controller to know exactly what is supported by the device, including any vendor-specific objects and parameters. Use of this Schema enhances interoperability and significantly eases the integration of new devices with a Controller. USP uses a different mechanism for the same purpose; this mechanism is specified in TR-369. WT-106 Amendment 10 is currently in progress.	Document Bitbucket Kanban Board	Jason Walls, QA Cafe
WT-104 (VOIPDM)	WT-104: Voice Service Data Model	WT-104 includes an overview document and XML files used for the VoiceService data model, used in modeling VoIP service functions on a TR-069 Endpoint or USP Agent. There is currently no active development version of WT-104.	Bitbucket Kanban Board	Tim Spets, Greenwave

WT-135 (STBDM)	WT-135: Set Top Box Service Data Model	WT-135 includes an overview document and XML files used for the STBService data model, used in modeling Set Top Box service functions on a TR-069 Endpoint or USP Agent.

There is currently no active development version of WT-135. | Bitbucket

Kanban Board | William Lupton, BBF |
| WT-140 (NASDM) | WT-140: Storage Service Data Model | WT-140 includes an overview document and XML files used for the StorageService data model, used in modelling Network Attached Storage service functions on a TR-069 Endpoint or USP Agent.

There is currently no active development version of WT-140. | Bitbucket

Kanban Board | John Blackford, CommScope |
| WT-196 (FAPDM) | WT-196: Femto Access Point Service Data Model | WT-196 includes an overview document and XML files used for the FAPService data model, used in modeling Femto Access Point (or Small Cell) service functions on a TR-069 Endpoint or USP Agent.

There is currently no active development version of WT-196. | Bitbucket

Kanban Board | TBD |
| WT-354 (DMR) | WT-354: Data Model Report Tool | WT-354 will describe a new CWMP and USP data model processing tool. This new tool (written in python) will be well-structured, maintainable, and will encourage collaborative development. The new tool will replace the old tool (written in perl). | Bitbucket

Kanban Board | William Lupton, BBF |

Project	Title	Description	Resources	Editors
WT-143 (PERMON)	WT-143: Enabling Network Throughput Performance Tests and Statistical Monitoring	WT-143 outlines the theory of operations for Network Service Providers to initiate performance throughput tests and monitor data on IP interfaces of CPE and end-user networking devices using the mechanisms defined in TR-181 (the Device Data Model) and operated via the CPE WAN Management Protocol (TR-069) or the User Services Platform (TR-369). WT-143 Amendment 2 is currently in progress.	Bitbucket (same as WT-181) Kanban Board	Jason Walls, QA Cafe
WT-473 (DMYANG)	WT-473: YANG Translation for CWMP / USP Data Models	WT-473 will document translation rules and tools for converting the WT-181 data model to two YANG schema representations: (1) Monolithic generic YANG model that is structured as faithfully as possible to the XML model and (2) YANG modules that would be suitable for implementations that can integrate with other YANG Modules - e.g., IETF-defined YANG modules.	Bitbucket Kanban Board	Andrew Patka, Verizon

Compliance Testing

Project Stream Page: Compliance Testing Project Stream

Project Stream Leads: Jason Walls

Description: This project develops test plans and certification guidelines for standards created by the BUS Work Area.

Project	Title	Description	Resources	Editors
ATP-069 Issue 2	TR-069 Abstract Test Plan	ATP-069 provides a test plan that may be used to verify conformance of a CPE Device to the requirements defined in TR-069.	In force version: ATP-069 Issue 2 Corrigendum 1	

| DTP-181 Amendment 3 | CWMP Interoperability and Functionality Test Plan | In order to ensure the continued growth of the TR-069 market and further the interoperability of the protocol, the Broadband Forum is creating a TR-069 Certification Program. Within this program, devices implementing a TR-069 management interface may be tested for their conformance to the TR-069 specification and various use cases. The TR-069 Certification Program started with the TR-069 Conformance Test Plan and now the CWMP Data Model Implementation Test Plan. To provide a consistent scope for this verification, BBF developed these test plans that are to be used by the testing agencies in the verification process.

This Internal Document provides a test plan that may be used to verify Interoperability of a CPE Device with an ACS Server through use cases. | Specification

Kanban Board

In force version: TP-181 Amendment 2 | |

| DTP-469 | Conformance Test Plan for USP Agents | Testing is crucial to promoting the interoperability and adoption of standards. To meet this, the Broadband Forum regularly produces test suites that validate the conformance of implementations of their standards. This specification defines the test setup, test procedures, and test metrics to validate Agent and implementations of the User Services Platform (USP), published as BBF TR-369.

This purpose of this document is to provide a definitive guide for validating the compliance of USP Agents in accordance with the specification.

The tests defined below are intended to validate the specific requirements outlined in the USP specification, as well as those requirements defined in the Device:2 Data Model for USP Agents for objects, parameters, commands, and events necessary for the operation of USP. | Test Plan

Bitbucket

Kanban Board

In force version: TP-469 Amendment 1 | Jason Walls, QA Cafe |

Subscriber Network Infrastructure Project Stream (SNIPS)

Project Stream Page: Subscriber Network Infrastructure Project Stream (SNIPS)

Project Stream Leads: Mike Talbert (WNC) and Martin Casey (Calix)

Description: To develop specifications related to the architecture and performance of the subscriber network.

Project	Title	Description	Resources	Editors

WT-488	Architecture and Requirements for Home Distribution Networks	This technical report intends to provide insights into home network use cases to facilitate the task of understanding the specificities of enabling a service provider-oriented home network. Project Scope: • Use cases for delivery E2E delivery of services to the end user • General architecture, management, and operational aspects of a Home Distribution Network • Deployment models for connectivity of end user devices • Components of home distribution network • Available In-home connectivity technologies • Aspects of the RG functionality and management specific to the architecture and management requirements of HDN	• HNAR: WT-488 Kanban Board • WT-488 Use Cases • NPIF - [PHYtx]: Architecture and Requirements for Home Distribution Networks	Aleksandra Kozarev (MaxLinear) Mike Talbert (WNC)
WT-398 Issue 3	Wi-Fi Residential & SOHO Performance Testing	This test plan provides a set of performance test cases with pass/fail requirements for 802.11n/ac/ax implementations, to assist operators in the selection of Wi-Fi capable devices. Operators will use additional criteria, such as deployment scenarios, customer needs, complexity, when selecting equipment and defining deployment configurations. These test cases are not suitable for consumer selection of devices in the absence of expert level understanding of Wi-Fi operation, configurations, and deployment scenarios. The corresponding certification programs of interoperability are "Wi-Fi 4" "Wi-Fi 5", and "Wi-Fi 6" for 802.11n, 802.11 ac, and 802.11ax in Wi-Fi Alliance, respectively.	WIFIPERF: WT-398 Kanban Board	Martin Casey (Calix)

WT-434	Performance Test of In-Premises Video Support Over WiFi			TBD

Subscriber Software, Hardware, and Applications PS (SHAPS)

Project Stream Page: Subscriber Software, Hardware, and Applications PS (SHAPS)

Project Stream Leads: Dennis Edwards (Nokia), Jason Walls (QA Cafe)

Description: To produce hardware and software design guidelines and requirements for subscriber devices and compute platforms, including remote gateways, access points, end-user devices, along with the applications enabled by those devices.

Project	Title	Description	Resources	Editors
WT-124 (next version TBA)	Functional Requirements for Broadband Residential Gateway Devices	TR-124 specifies a superset of requirements for broadband Residential Gateway (RG) devices that are capable of supporting a full suite of voice, data, broadcast video, video on demand and two-way video applications in broadband networks	In-force: TR-124 Issue 7 (PDF)	Jason Walls (QA Cafe)
WT-492	Software Based Architecture Smart Gateway Design Principles	The overarching guide to building and deploying an ASG and its applications.	Wiki version - WT-492 Software Based Architecture for an App-Enabled Services Gateway - Design Principles	Mike Talbert (Verizon)

Smart Home PS

Project Stream Page: Smart Home Project Stream

Project Stream Leads: Tim Spets (Nokia), Jason Walls (QA Cafe)

Description: This project develops

- Smart Home product and application requirements based on expectations from service provider deployments
- Architectures, theories of operations, and guidelines for Smart Home product and application management, fitting into the User Services Platform ecosystem
- Connectivity & quality assurance test plan/certification for smart home products

Project	Title	Description	Resources	Editors
TBD	TBD	TBD	Smart Home Active Discussions	Jason Walls (QA Cafe) & Tim Spets (Nokia)