



ISO/IEC JTC 1/SC 25 N 1764

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Replaces ISO/IEC JTC 1/SC 25 N/A

ISO/IEC JTC 1/SC 25
INTERCONNECTION OF INFORMATION TECHNOLOGY EQUIPMENT
Secretariat: Germany (DIN)

DOC TYPE: Voting report

TITLE: Voting report on SC 25 N 1722: FCD ISO/IEC 29104-1: Information technology – Centralized Management Protocol (CMP) for ubiquitous home network services - Part 1: Remote management of residential gateways

SOURCE: SC 25 Secretary

PROJECT: 25.01.15.01

STATUS: The NWIP has been distributed with the SC 25 N 1208 and JTC 1 N 8174. It has been approved as recorded in SC 25 N 1241
The CD was distributed with SC 25 N 1330 and did find substantial support as recorded in SC 25 N 1390. The comments were resolved as recorded in SC 25 N 1721.
The FCD was distributed with SC 25 N 1722 and did not find substantial supports since more than 25 % of those countries who voted, voted against.
A number of countries expressed doubts about the justification putting further effort in this project. The many abstentions received could be interpreted as supporting such doubts.

ACTION ID: FYI

DUE DATE: n/a

REQUESTED ACTION: For information

MEDIUM: Def

DISTRIBUTION: ITTF, JTC 1 Secretariat
P-, L-, O-Members of SC 25

No of Pages: 9 (including cover)

Title **SC 25 N 1764 voting report on SC 25 N 1722: FCD ISO/IEC 29104-1: Information technology – Centralized Management Protocol (CMP) for ubiquitous home network services - Part 1: Remote management of residential gateways**

Approval of text of FCD ISO/IEC 29104-1

No Substantial Support

RESULT OF VOTING not counting abstentions as votes

P-Members voting: 8 in favour out 12 of = 66,67 % (requirement \geq 66,66%) of those who have voted

P- Members voting: 4 negative votes out of 12 = 33,33 % (requirement \leq 25%)

P-Members reacting: 17 out of 30 = 56,67 % (requirement \geq 50%)

		Membership	Vote			Comments	
			Yes	No	abst.	given	#
Australia	SAI	P	1				
Austria	OVE	P	1				
Belgium	NBN	P		1		1	1
Canada	SCC	P			1		
China	CESI	P	1				
Czech Republic	UNMZ	P	1				
Denmark	DS	P			1		
Finland	SFS	P					
France	UTE	P		1		1	1
Germany	DKE	P		1		1	6
India	BIS	P					
Ireland	NSAI	P					
Israel	SII	P					
Italy	CEI	P		L		1	9
Japan	JISC	P	1				
Kazakhstan	KAZMEST	P					
Korea	KATS	P	1				
Lebanon	LIBNOR	P					
Mexico	DGN	P					
Netherlands	NEC	P		1		1	1
New Zealand	SNZ	P					
Norway	NEK	P					
Poland	PKN	P					
Russian Federation	GOST R	P					
Singapore	SPRING	P					
Spain	AENOR	P			1		
Sweden	SNC	P			1		
Switzerland	CES	P			1		
United Kingdom	BSI	P	1				
USA	ANSI	P	1				
Sum	not reacted	13 of 30	8	4	5	5	19
	reacted	56,67%	66,67%	33,33%			
Greece		O			1		
Legend L: late not counted							

Collation of comments on SC 25 N 1722 FCD 29104-1: Information technology – Centralized Management Protocol (CMP) for ubiquitous home network services – Part 1: Remote management of residential gateways

E: editorial, G: general, T: technical

Page	Line	Clause	E/G/T	ID	Comment	Proposed change	Secretary's observation
00	000		G	DE-01	The German National Body disapproves the above-mentioned document for reasons given below.		Note
00			G	DE-06	TR-069 has already been widely deployed raising the question of the role of CMP in the market.	Add TR-069 in clause 4 as an alternative option to the residential gateway interface protocol (HRIP) described in clause 5.	See DE 02, but also BE and NL.
00			G	Fr01	The historical French telecom operator considers that the resolution of comments of ETSI as recorded in 25N1721 are not sufficient to ensure full compatibility with TR-069	Reconsider the ETSI comment.	See DE 02, but also BE and NL.
00			G	NL	This document doesn't contain a specification that's likely to be referenced or adopted by the industry.		In case the comment of the Netherlands is correct, the project should be terminated. See also BE.
0			G	IT1	The Italian NC casts a negative vote for the above mentioned document for the following reasons:		Note
0			G	IT2	The proposals in object is a new edition of a previous one, dating back to 2008, that was at that time rejected due to several comments received. A general comment refers to N 1722, N 1735 and N 1737 that the changes introduced with respect to the initial proposal hardly meet the issues risen by the comments expressed at that time. In fact the new document is substantially the same that had been submitted 2 years ago, and the same comments still hold. Moreover, the TR069 has in the meanwhile evolved and included new devices and features, improving its characteristics, and the basis of devices implementing has further enlarged worldwide. The issues raised at that time implied the request to make the new proposed standard compatible and aligned with existing TR069, that have not been met in the new version. The detailed comments follow:		It was in 2007 when the voting result on the CD was distributed. The CD found substantial support but the many comments on the relationship to TR 69 resulted in Resolution SC 25: 18/ 1 , see DE 02
0			T	IT3	- ISO/IEC proposes to address the security issues of its communication protocol basing upon a Korean standard. On the other side, TR-069 CWMP security issues are addressed basing on standard IETF RFCs.		Reference to IETF RFCs are acceptable to an international standard. While the reference to a national standards provide problems.

0			T	IT 4	- This document defines a remote management protocol for Residential Gateways (RG), i.e. an interface at the NE-EM layer, where the NE is the RG and the EM is the Management System of the RG: this is the same scope of the CWMP protocol defined by DSL Forum with the TR-069 management framework, and adopted by HGI and DVB, for the management of home gateways and home network terminals by means of a TR-069 management system (named ACS=Auto Configuration Server)		See NL
0			T	IT 5	- The ISO/IEC protocol is based on SOAP (XML over HTTP), exactly as TR-069 CWMP. TR-069 CWMP and ISO/IEC protocol are both access network agnostics, i.e. they rely on internet protocols and then may be used whatever is the access network technology (xDSL, Cable, Fiber, ...), if this supports TCP/IP communication.		See NL
0			T	IT 6	- Then the ISO/IEC proposal defines a set of management functionalities that have to be implemented as specific Remote Procedure Calls (RPC) over SOAP (e.g. Residential gateway disk resource information query function call = "getRgDiskRsc"). Each of these specific RPCs embeds both a management task and the corresponding management information.		See NL
0			T	IT 7	- On the other side, TR-069 CWMP defines a basic set of generic RPCs that cover the management functionalities for Configuration Management (including provisioning and firmware upgrade tasks), Fault Management (including alarm management, troubleshooting and diagnostics tasks), Performance Management (including usage/statistics monitoring). Then, with other specification documents, DSL Forum defines the TR-069 data models for the management of specific devices and service features (i.e. sets of TR-069 parameters that, using the CWMP protocol RPCs, allows the exploitation of the need management function); examples of TR-069 data models are TR-098 (xDSL Internet Gateway Device), TR-106 (generic device), TR-104 (VoIP device), WT-140 (Network Storage device), WT-135 (IPTV STB device).		See NL
0			T	IT 8	- Comparing ISO/IEC specification with the set of DSL Forum TR-069 based specifications, it is evident that this ISO/IEC specification for management of RG currently includes a limited subset of the functionalities delivered by TR-069 + TR-098.		See NL

0			T	IT 9	- Generally speaking, because the ISO/IEC protocol merges the communication protocol and the information exchanged, it is less flexible than DSL Forum TR-069 approach.		See NL
0			T	IT 10	- Indeed TR-069 remote management is also applicable to the direct management of home LAN devices behind the RG, while this option is not covered by the ISO/IEC protocol.		See NL
1	1		T	BE	In summary: 1. CMP is not technically sufficient from a functional or interoperability standpoint. 2. CMP is not truly harmonized with the broadband Forum TR-069. 3. CMP is not international in its deployment scope. These points are elaborated in more detail below in Annex 1.	Replace whole CMP specification with reference to Broadband Forum TR-069 for remote management of residential gateways. The BBF TR-069 is available at: http://www.broadband-forum.org/technical/trlist.php	This comment raises the question whether this project is worth to be continued, see also NL. Annex 1 provides the impression of considerable work being needed to reach a ripeness already reached by TR 69 that is accepted by the market.
8	122 - 132	Introduction	E	DE -02	“While the CMP based on SOAP (see ISO/IEC 29363) describes a home device remote control interface by using a Web Service Description Language (WSDL) as specified in ISO/IEC 25437, the remote management scheme of multiple RGs and home appliances networked in the premises can be generic by adopting Remote Procedure Call (RPC) methods as specified in Broadband Forum TR-069. The RPC method-based remote management mechanism is good for providing scalability in the sense that direct remote management of end user devices by the remote management system is possible. On the other hand, the remote management mechanism based on the HRIP proxied by the standardized RG is also a good approach that can provide a level of degree of freedom in implementing the Residential Gateways with extra parameters to be specified in this specification. These additional parameters of Residential Gateways are defined in Annex C of TR-069.” This text acknowledges that TR-069 is a good solution. Also it refers to parameters that are defined in Annex C of TR-069. Yet, in the subsequent clauses TR-069 is not mentioned as a viable solution for HRIP (HOMS-RG Interface Protocol).	Add TR-069 in clause 4 as an alternative option to the residential gateway interface protocol (HRIP) described in clause 5.	Also withdrawn at the plenary at Beijing the following resolution from Jeju seems vital for the acceptance of this specification: Resolution SC 25: 18/ 2 (25.01.15-01, -02, -03) Resolution WG 1/10 SC 25 instructs its secretary to distribute "FCD 29104-1,-2, -3: IT - Centralized Management Protocol (CMP) for Ubiquitous Home Network Services - Part 1: Remote Management of Residential Gateways, - Part 2: Remote management of application servers, - Part 3: Remote Management of User Terminals" as soon as provided by WG 1 and confirmation has been received from WG 1 that the comment resolution, had been offered for a four weeks review by

							the contributing partners (ITU-T, ETSI and DSL Forum) before the next voting stage in SC 25, to ensure that their concerns are fully taken into account.
16	369	5.3.10	T	DE-03	Table 17 lists a “security warning event type” of data type int. The document does not specify a list of possible values for “security warning event type”.	Provide specific definitions of values for parameters that are not of type string.	A standard needs to provide all details needed for implementation
60	616	Bibliography	E	DE-04	“ISO/IEC TR-14543, Home Electronic System Architecture” ISO/IEC 14543 is an International Standard not a TR.	Enter correct title for ISO/IEC 14543.	ISO/IEC 14543 is a series. Either add series or list all parts
60	623-624	Bibliography	E	DE-05	“TR-069, CPE WAN Management Protocol, Broadband Forum, available at < http://www.broadband-forum.org/technical/trlist.php >” The introduction mentions that Annex C of TR-069 defines parameters referred to in ISO/IEC 29104-1.	Move this text from the Bibliography to clause 2, normative references, or add a normative reference to the corresponding ITU-T standard.	Could be the (only) way to gain the necessary support for this specification. See also FR, but consider the justification for further effort in the light of BE and NL.

Annex 1 - Detailed comments from Belgium:

Technical Concerns with the CMP spec:

- The tightly coupled nature of CMP, which has been shown in our analysis to be neither scalable from an implementation point of view nor from an ongoing specification point of view as additional services and features are added to the home network. Additionally it is out of alignment with the general direction of service oriented architecture and programming.
- The interoperability issues raised not only by the tightly coupled nature of the protocol but also by the lack of specification of session initiation, termination, error conditions, and retry mechanisms. It does not seem to have benefited from any implementation interoperability testing amongst different vendors, which will likely pose serious challenges in its field deployment.
- The incompleteness of the managed functions defined. They do not include basic requirements of the service provider community, including QoS management, various WAN and LAN interface management, statistics gathering, diagnostics testing, and the management of additional value-added services such as IP video, VoIP, and storage/content services.
- The incompleteness of the specification of the existing managed functions. For example parameters such as deviceType are only defined as being “home device type” without indicating how that type is to be determined, what the available options are, and any constraints (such as maximum length) on the variable itself. Such issues will have a severely negative impact on multi-vendor interoperability.
- The lack of detail about encoding UPnP information or actions across the WAN.

Specific Broadband Forum (TR-069) concerns:

The current document merely lists information about the CWMP protocol as defined in TR-069 as an alternate to the specified CMP protocol as originally defined in the previous version of these documents. It does nothing to bring these two approaches together, nor does it foster interoperability across vendors. We do not believe that the goal of the harmonization exercise has been achieved. We further believe that introducing yet another device management protocol into the industry will do nothing to serve consumer or operator needs, especially as TR-069 has been widely deployed and validated as meeting these industry requirements. Interoperability, real-world deployment experience, scalability, world-wide geographic coverage, and applicability to the industry are the hallmarks of any successful technology. To that end, the following information represents a non-exhaustive survey of TR-069 deployment and implementation:

- There are close to 40 Million shipments of TR-069 managed devices worldwide
- Service providers deploying TR-069 include:
 - AT&T
 - Bell Canada
 - BSNL
 - BT
 - China Telecom
 - Deutsche Telekom
 - Embarq
 - France Telecom
 - Hansenet
 - Iskon
 - NetOne
 - Qwest
 - Singtel
 - Swisscom
 - Telecom Italia
 - Telekomunikacja Polska
 - TeliaSonera
 - TelMex
 - Telstra
 - TELUS
 - Verizon
 - Vivodi

- Vendors who have implemented TR-069 and/or participated in interoperability plugfests include:
 - 2Wire
 - 3Com
 - ActionTec Electronic, Inc.
 - Airvana
 - Alcatel-Lucent
 - Allied Telesis
 - Alpha Networks, Inc.
 - Alpha Telecom, Inc.
 - AVM GmbH
 - Axiros GmbH
 - Aztech
 - Broadcom Corp.
 - Centillium
 - Cisco Systems
 - Cisco Systems – Linksys
 - Cisco Systems -- Scientific Atlanta
 - Comtrend
 - Conexant
 - D-Link
 - Dimark Technologies
 - Fine Point Technologies, Inc.
 - Funkwerk GmbH
 - Gatespace
 - Huawei
 - Infineon Technologies AG
 - Jungo
 - Motive, Inc.
 - Motorola
 - NETGEAR, Inc.
 - Philips
 - Pirelli Broadband Solutions
 - QA Café
 - Realtek Semiconductor Corp
 - SMC Networks
 - Sercomm
 - Siemens
 - Sphairon
 - SupportSoft
 - Telsey S.p.a
 - Texas Instruments
 - Thomson
 - Tilgin AB
 - Trendchip
 - Ubicom
 - Westell
 - Works Systems
 - Zhone Technologies
 - ZTE USA
 - ZyXEL Communications, Inc.
- Device types currently managed by TR-069 in deployment:
 - Residential Gateways
 - xDSL Modems
 - Wireless Access Points
 - VoIP devices
 - Set Top Boxes (Digital TV, Satellite, and IPTV)

The service providers and vendors on this list represent a commitment to TR-069 that spans geographies, services, and company size. There have been numerous plugfests hosted by multiple interoperability test labs,

and these events have proven that TR-069 is a multi-vendor interoperable protocol, just as the deployment figures demonstrate its scalability.

In addition, the following SDOs and consortia have referenced the TR-069 management framework for remote management of residential gateways and other home networking devices in their own documents or specifications:

- ATIS IPTV Interoperability Forum (IIF)
- ITU-T home networking and IPTV documents
- ETSI TS 183 065
- Home Gateway Initiative
- Digital Video Broadcasting (DVB) IPI documents
- Femto Forum
- WiMAX Forum
- Open IPTV Forum

These other groups have dependencies on TR-069 for remote management of a wide array of services and devices specified for these other groups that could be adversely affected by the introduction of an alternate technology.

Finally, this is not an international standard. It has been deployed within one telco in one country. It is very hard to view it as meriting the stamp of international recognition when it is so limited in its geographic applicability.

----- end of comments -----