

Definition of the Residential Gateway (JTC1/SC25) / Home Server (IEC TC100)

Note: By 2006 more than 33 millions Residential Gateways are expected e.g. in US homes

JTC1/SC25:**ISO/IEC CD 15045-1 Information technology - Home Electronic System (HES) gateway – Part 1: A Residential gateway model for HES**

The Residential Gateway (RG) is a device of the Home Electronic System (HES) that connects home network domains to network domains outside the house. It supports communications among devices within the premises and systems, service providers, operators and users outside the premises.

The RG enables service and content providers to deliver services such as entertainment, video and broadband digital streams, monitoring for health care, security and occupancy, home appliance control and preventive maintenance, remote metering, and energy management. The RG specified by this standard does not imply the use of any particular protocol such as IP and it is recognised that many forms of the RG will exist using many types of data such as analogue video and broadband digital streams. However, when IP is used, requirements of this standard exclude IP6 and higher.

IEC TC100: Audio, Video and Multimedia Systems and Equipment**IEC/TS 62318 – 2003 - Multimedia systems and equipment - Multimedia home server systems - Home server conceptual model**

Describes a home server conceptual model for multimedia home server systems. A home server conceptual model is specified from the standardization point of view to clarify the functionality and modularity of existing and future home servers.

Further definitions to be found at different Internet URL

"Residential Gateway":

http://searchnetworking.techtarget.com/sDefinition/0..sid7_gci214310.00.html

a device that terminates one or more external network(s), provides and enhances access to the Internet, and distributes service(s) via an in-home network."

Cisco Systems: "an intelligent gateway between networked information appliances inside the home and an intelligent broadband access network."

Connections:

A residential gateway is a device that connects to an external network or multiple access networks and distributes service(s) to one or more devices through some type of network in the home.

According to the Residential Gateway Group (RG Group), an informal industry consortium established in 1995, the term RG should represent a centralized intelligent interface / termination point between external residential access networks and in-house networks with these two key functions:

- acting as a hub that interfaces between various number of different in-home networks (HAN Home Area Networks) in the home and outside connections.
- providing where required, a secure hand-over of encrypted content to an authorized domain

Essentially, the RG Group envisions the RG as a single, intelligent, standardized, and flexible whole-house network interface unit that receives communication signals from various external networks and delivers the signals to specific consumer devices through in-home networks.

Further (possible) RG concepts

Home Server: Primary storage device (e.g. PVR) as a single, shared store for the users digital content from various digital devices throughout the home.

Enabling platform: for residential services to be delivered to the consumer, including both existing services and new ones the user will subscribe to.

Some “other references”:

Over the past several years, efforts from multiple industries have attempted to push the residential gateway beyond a conceptual stage. But in the meantime the term "residential gateway" is being used to refer to many different types of products, which already provide some specific “gateway” functions.

Examples:

Cable modem

Set-top box

Hub of a structured wiring system

enhanced PC

A broadband modem connected to an inHouse network

the Ericsson's e-box