

## Home bus systems in Europe – A short overview

With the beginning of the 1980's, the increasing integration density of microelectronic components and their continued drifting down of prices led to more and more "smart" household devices. This trend facilitates now the interconnection between the distributed, independent systems, what leads to very new features: An upgrade in user comfort, a more economic utilisation of energy or improved security and safety services are some examples. The potential applications are growing by the number and variety of the inter-connected devices. A prerequisite for an information exchange between different device types of different manufacturers is an open, manufacturer-independent and device-spanning communication standard.

Three European home bus communication standards achieved a wide public: *BatiBus*, *EHS* and *EIB*. Organisations have been founded for product certification, to improve the collaboration between the involved companies and to coordinate their marketing activities:

### **BCI: BatiBUS Club International**

(<http://www.batibus.com>)

The BatiBUS Club International (BCI) was founded in 1989 as a trademark association. Today, more than 80 members of the BCI are involved in the fields of lighting, heating, energy control, access & store control, information & communication technology, supervisor software and system engineering. The members of the BCI are mostly located in France or in Italy. The technological leader of BatiBUS is the French company Groupe Schneider.

### **EHSA: European Home Systems Association**

(<http://www.ehsa.com>)

The EHSA was founded in 1990 by several companies, which developed the EHS standard in the framework of the ESPRIT Home Systems (ESPRIT was one initiative by the European Community to enforce research and development activities). But EHS products have not achieved a marketable state. Nevertheless, the Power-Line solution of EHS has a respectable success on the

market, without the complete (and complex) EHS protocol stack in the background. Several millions of the EHS power-line-modems ST7537 from ST-Microelectronics have been sold, for industrial as well as for home applications.

### **EIBA: European Installation Bus Association**

(<http://www.eiba.com>)

The EIBA was founded by 15 firms in 1990 as a trademark association. Today it counts more than 120 members and licensees in branches such as electrical installation, heating and sanitary requirements, white and brown goods, security and store control, and information & communication technology. Most of them are located in Germany, but there are also members located in Austria, Belgium, Denmark, Finland, France, Israel, Italy, Netherlands, Spain, Sweden, Switzerland and United Kingdom. Up to 2000, the companies organised in the EIBA sold more than 7.000.000 communication units, by what the standard is established as the most successful on the market.

## Konnex – The new era

Because the European home bus market was splitted up, a lot of European manufactures for domestic appliances hesitated to start with their own developments. This irresolution restrained the growth of a real European mass market for home automation. The risk, that a non-European home bus system (like the US-American LON or CeBUS) would become a de-facto-standard raised.

In June 1996, the EHSA started an initiative with the aim to converge the three standards BatiBUS, EIB and EHS (*Convergence*, Villard-de-Lans (France) 1996). At April 14<sup>th</sup> 1999, the new and common organisation

has been founded in Brussels as an organisation under Belgian law. The task of this new association is to build upon the existing competencies, technologies and resources of the three industry associations a common standard for homes and building communication. In the long run, the new organisation will replace the three existing associations and it will overtake their tasks.

A proposal for a unique specification was presented mid-1999 in its version 1.0. By the end of 1999, the new standard was named "Konnex" (or in short "KNX"). The intermediate logo is the compilation of the three logos of the organisations with an arc as

a symbol for the converging standard. The registered web-page is <http://www.konnex.org/>.