Inaris EPG Solution

TARA Systems

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For manufacturers, which want to integrate the important EPG feature into their devices, TARA Systems offers the flexible Inaris components, to facilitate the development of consistent, user-friendly and innovative EPG applications.

In today's multimedia world with a wide variety of analogue and digital TV programmes the Electronic Programme Guides (EPGs) have become important for STBs and a prerequisite feature for PVR devices. Due to ongoing convergence, EPGs are now also entering mobile and automotive devices. Because of the choice of different available EPG data providers, the varying quality of EPG data and the consumers' demands regarding archiving of data, a solid strategy for EPG data reception and management is required.

For several years TARA Systems provides EPG software solutions which are currently used inside millions of devices, like STBs, PVRs, TV sets, mobile and automotive devices. Based on this long-term experience, TARA Systems offers the flexible Inaris EPG solution to enable and facilitate the development of fast, consistent and user-friendly EPG applications.

Fig. 1: Screenshot of Gridview demo application.

Flexible Inaris Architecture

The modular Inaris solution combines several receivers for different EPG services via DVB and IP with a full featured embedded In-RAM database, called Inaris DB, for storage and management of EPG information and other data. The EPG's user interface can be fully customized, extended and prototyped on PC with TARA Systems' own GUI tool "Embedded Wizard".

Fig. 2: Kathrein's "UFS712" DVB-S Receiver uses Inaris Database, Inaris tvtv digital receiver and Embedded Wizard for GUI development.

The Inaris components with open interfaces and sophisticated specifications are completely adaptable to the customers' requirements. Therefore, all combinations of Inaris modules – with or without Embedded Wizard GUI or even stand-alone usage of EPG receivers – have been applied in our customers' EPGs within STBs, IDTVs and PVRs. In all cases, the usage of Inaris has reduced the development effort enormously and has facilitated the creation of a unique EPG application.

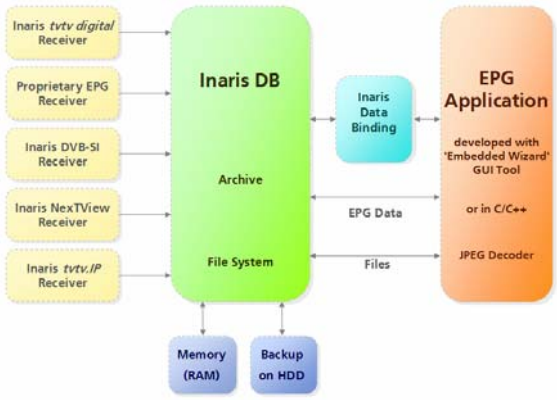

Fig. 3: Flexible Inaris EPG Architecture

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Features & Workflow

TARA Systems offers Inaris EPG receivers for different EPG services via DVB or IP and the Inaris DB with clear specifications (API) and a framework for an easy start-up. TARA's customers integrate the modules they need into their own software to develop their EPG applications with minimal effort.

The various Inaris EPG receivers extract the EPG information and – if available - image files from the incoming data streams. Within the Inaris DB, different EPG data sources can be merged for hybrid EPG solutions. Also the integration of existing customer EPG receivers is possible. Besides EPG data, the database is suited to store and manage archives, recording lists, programme lists and customer specific data. The image files are displayed with TARA's own JPEG decoder.

To facilitate the user interface development, TARA Systems optionally offers the Inaris Data Binding classes, which connect the Inaris Database and TARA's own GUI development tool "Embedded Wizard" and enable full GUI customisation and prototyping on PC.

Inaris Database

- High performance DB engine, suited for common real-time requirements
- RAM-based DB with scalable, bounded runtime memory
- Back-up to persistent storage (HDD, FLASH)
- XML export of stored data
- Concurrent DB access for multitasking environment
- Free definition of schemas, including tables, columns and indexes
- Filter language and optimized search algorithms for complex search requests with fast response
- Collation management for intelligent language specific sorting of text data
- Unicode support for international markets
- File system included, e.g. for image data in Electronic Program Guides.
- Complemented by detailed specifications
- Reference application as starting point for customer developments
- Small footprint: Code size ~ 100 Kbytes (Reference: ST20 core)

Inaris DVB-SI Receiver

- Supports DVB-SI standard (ETSI EN 300 468). Convenient data access for PAT, PMT, SDT, EIT, NIT tables
- Support of Freeview for the UK market
- Performance optimized: Call-back based parsing and linear memory manager for maximum parsing efficiency
- Support of SI version controlling and various applicable filters (service filter, language filter, table filter)
- Converts DVB-SI strings to Unicode
- Code size ~ 11 Kbytes

Inaris NexTView Receiver

- Receiver for analogue NexTView EPG data.

Proprietary & Customer Receivers

- Further proprietary receivers for EPG data reception via DVB and IP are available on request.
- TARA's modular approach and open interfaces enable the connection of further customer specific EPG data receivers to the Inaris Database.

Supported Chipsets & Platforms

AMD: Xilleon 2xx. Fujitsu: SmartMPEG. IBM: PowerPC. Micronas: MDEx, VGC. NXP: PNX8550. STMicroelectronics STi5514 - STi5518, STi510x, STi7100. Toshiba: TC90400. Zoran: SupraTV.

Roadmap 2007

- Development of further receivers for other EPG data services
- Storage of Meta Data, e.g. MP3 ID3-Tag
- Integration of Inaris components and other TARA software towards a full DVB stack.

Contact for further information

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