

## Conference for Training Centers

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# Agenda

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## Part 0: ETS4 state of affairs, common information

- Several issues
- Confidentiality
- Main aspects on ETS4 development

## Part 1: ETS4 user interface (study)

- What we did in advance?
- What are the results (out of the UI study)?
- How we perform the issue?

## Part 2: ETS4 new functionality

- What will be new functionality (compared to ETS3)?

## Part 3: ETS4 techniques & data structures

- What are the new to be used techniques within ETS4?

# Part 0

## Common Information

# ETS4 State of Affairs

## Common Informationen

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### **(Performed) requirement steps for ETS4**

- 07/2007-01/2008: merge and summarize requirements (out of existing & new requirements from performed test workshops, support case issues) and additionally from
    - User club (forum) inputs, e.g. Project „Tracing“ , Parameter “Editing” , ...
    - Training centre inputs as handling of licensing issues, ...
  - 02/2008: release of requirement specification (via KNX and [elected] decision board)
- ETS4 requirement phase completed

### **Implementation steps for ETS4**

Phase 1 (07/09 ++): first internal beta version (manufacturer, test workshop)

Phase 2 (Q3/09++): internal test with (international) user club members

Phase 3 (02/10): Training Centers (if required, who will organize it?)

Phase 3 (Q1/10++): release tests for L+B 2010, official release planned ~ 2 month after L+B

# ETS4 State of Affairs

## Confidentiality

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We kindly ask the participants to consider the following issue:

Based on the friendly relations between KNX and training centers we are glad to present here these (still) internal information, with the request that the presented issues

- *shall not be published in every way*
- *shall not be discussed (e.g. in a [user club] forum)*

The presented issues serves only for information (exclusively) to the present meeting participants.

The presentation shows the current status of ETS4 development and does not comprises any demand of completeness or a derivable claim of 1:1 implementation of presented issues in the final ETS4 release version.

# ETS4 State of Affairs

## Main aspects on ETS4 development

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Primary aspects for ETS4 development , defined in advance of project start :

- Simplify the user interface (overview, organization, handling)
- Increased performance on project design/ commissioning
  - Remark to always discussable download times (bus download, image preparation, ...)
- Integration of useful (today missing) user functions

# Part 1

## ETS4 User Interface



# ETS4 User Interface

## Retrospect, Schedule

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Within 2007/2008 KNX performed an so called user interface (UI) investigation with the aim to define a reliable approach of next ETS(4) user interface.

To reach that aim following steps were done:

- 2007/05** Inquiry and partner selection, → company ERGOSIGN
- 2007/07-12** Workshops, meetings & presentations with ERGOSIGN, KNX and manufacturer (working group)
- 2008/01-06** International customer survey (incorporation of customer feedback, needs)  
Rework of UI style guide specification in core team group, decision approval of UI style guide by working group
- 2008/10**
  - Prepare release proposal for KNX executive board (KEB)
  - Decision within KEB about UI style guide specification & next steps
- 2008/11++** Start of UI design & implementation (within context of ETS4 development)



# ETS4 User Interface

## Retrospect, Results

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As output of ETS4 UI style guide an specification (“Lastenheft“, 370 pages) of company ERGOSIGN for ETS4 with following segmentation was created:

- Part I Prerequisites rules & guide lines
- Part II UI Specification ETS4 professional user interface
- Part III Novice User Interface ETS4

### Current KNX Voting Results

1. Seen under view of a development guideline the vote for ETS4 **professional** part (Part I & II) of style guide is positive.

→ **approved**

2. In Part III only one possible example is shown, how ETS4 user interface for **novice** channel concept can be developed out of that style guide. The KNX declined that these is the finalized and to be used solution.

In order to approve the style guide Part III KNX furthermore featured out, without having a proper “prototype” a statement about the usability of novice concept cannot be derived out of the style guide only.

→ **not approved**

# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, dash board (sections)



Multiple  
Dashboard Tabs

# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, dash board, tab “overview”



# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, tab “projects”



# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, tab “projects” example



# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, tab “catalogs”





# ETS4 User Interface

## Example UI style guide ETS4 professional

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ETS4 professional, building & group address view

← Multiple Project Tabs

← Dynamic Folder

# ETS4 User Interface

## Example UI style guide ETS4 professional

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**ETS4 professional, device view**



# ETS4 User Interface

## Example UI style guide ETS4 professional

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**ETS4 professional, product finder view**



# ETS4 User Interface

## Example UI Style Guide ETS4 professional

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ETS4 professional, tree slider view





# ETS4 User Interface

## Results from user survey to ETS4 style guide

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There are several feedback comments, given from the users which were involved in the survey on ETS4 UI style guide definition and its prototype.

### **New introduced design elements**

- Introduction of „Wizard“ concept positive agreed by survey participants
- Introduction of „Dynamic Folders“ are an efficient method for visualization of customer selections
- Navigation between different system levels (download, commissioning, ...) easy to understand

### **New user interface style**

- Positive comments to visual design proposal



# ETS4 User Interface

## Advantages compared to ETS3 UI

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There are several advantages revealed out within the UI style guide project, some of them enumerated below.

- Nearly 1:1 relation to known behaviour of Microsoft windows look & feel
- Guided workflow from start-up to bus configuration
- Context sensitive help available
- Multiple (project specific) undo steps
- Full mouse and keyboard support within ETS4 interaction
- Availability of modifiable templates for building structure
- **Dynamic Folders**



# ETS4 User Interface

## Advantages compared to ETS3 UI

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### Dynamic Folder, Definition Example

# Part 2

## ETS4 New Functionality

# ETS4 New Functionality

## Packet Content

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### ETS4.0

Name: ETS4.0 Professional

Content: Following user functionality from ETS4 requirement specification included:

[Details \(EN\)](#)

1. Project compare
2. Proper defined copy & paste methods (duplicate of project and project elements)
3. Tool installation & online update (basic methods)
4. Tool licensing and packaging (ETS4 Main & ETS4 monitor/ download version)
5. Long time recording functionality
6. Split & merge
7. Tool diagnostic & projects diagnostic wizard
8. Project tracing
9. Label creator
10. Find & replace (including exchange of application program and device replacement)
11. Extension of product catalogue (storage of self parameterized devices within imported catalogue)

# Part 3

## ETS4 Techniques & Data Structures



# ETS4 Techniques & Data Structures

## New Techniques

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The base for a stable ETS4 are the following development tasks:

- a) Change of data base from SYBASE to MSSQL (Microsoft)

The current ETS3 works with an data base driver , called SYBASE.  
The used driver is from 2002. This driver must be updated to a free and  
by the new introduced operating systems (as Windows Vista) also in the future supported  
data base driver. The new driver is called MSSQL.

- b) Implement new XML based manufacturer tool

XML as a standardized data exchange format. → [XML Scheme](#) (Extract)  
It will be used for future data exchange of entire ETS data as project and product data.  
Advantage is the readability of data in text form and a wide range of supporting tools.

- c) Change of ETS data exchange format to XML

Please see under point b).

# ETS4 Techniques & Data Structures

## XML

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To fulfill existing requirements out of ETS3 and other ones even better (as today) the decision was taken to use for ex/ import the XML format in general for ETS4.

### XML (Extensible Markup Language)

- Officially, standardized & published format (W3C)
- Language for definition/ presentation/ exchange of hierarchical structured data
- Defines for an use case via a scheme the entire data structure → **the KNX XML scheme**
- By human being readable file content (e.g. in a web browser)

For XML exists a wide range of free and commercial tools.

XML Extract: <http://de.wikipedia.org/wiki/XML>

**KNX** Example XML File: [Link](#)

# Backup

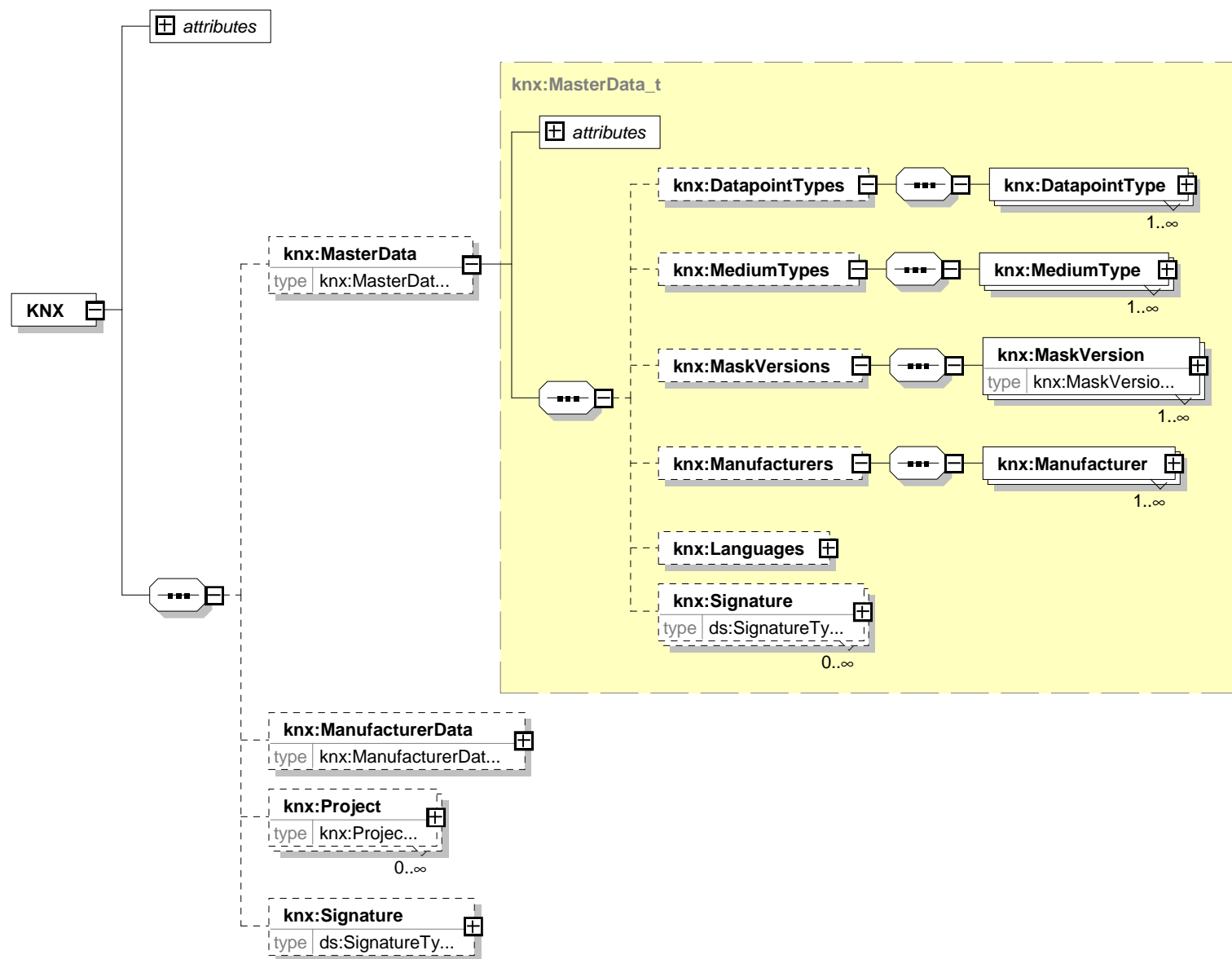


# ETS4 Manufacturer Tool

## What's New?

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- Complete redesign (stand alone tool, no workspace) for developing of ETS4 & ETS3 products
- Developed as Visual Studio 2008 Plug In
- XML data driven data handling approach (according ETS4 XML data)
- Available end of 2009



Nb.	Item	Explanation
1	Project Compare	<p>Used to compare ETS projects existing in an ETS data base (i.e. the customer project) with a known project in a local existing installation.</p> <p>As result of compare a statement is given, on which an installer can see differences / changes between current project within its ETS database and the local installation. The compare makes only sense if local installation was done originated by the ETS project out of the (to be compared) database.</p> <p>→ check on allowed changes, legal issue</p>
2	Proper defined Copy & Paste Methods (duplicate of project and project elements)	<p>Copy, duplicate entire rooms with self created templates, including intelligent adaption filters (extend GA's, PA's, to given rule → similar to ETS3 copy of #1 but more flexible)</p>
3	Tool Installation & Online Update (Basic Methods)	<p>Installation of ETS under certain operating systems (32/64 Bit windows) and additionally the capability of online ETS updates. Parallel installations of ETS3 &amp; ETS4 are possible (share of KNX Falcon).</p>
4	Tool Licensing and Packaging (ETS4 Main & ETS4 Monitor & Download Version)	<p>Licensing (standard process) and two additionally ETS shapes:</p> <p><b>Monitor Version (LH 2.1.2.2.1):</b> Diagnostic function, no project commission of any project, trace recording of KNX bus and subsequent filtering &amp; statistic of recorded trace</p> <p><b>Download Version (LH 2.1.2.2.4):</b> Simple download tool without project commission, for service and support issues (spare parts)</p>
5	Long Time Recording Functionality	<p>Long time-recording (e.g. with monitor version) and detailed analysis of:</p> <ul style="list-style-type: none"> <li>- Analysis of time span's</li> <li>- Analysis of bus load</li> <li>- View of connection oriented/less bus traffic</li> <li>- Visualize project specific device to telegram assignments</li> <li>- Statistics from coupler, and other</li> </ul>
6	Split & Merge	<p>LH 2.3.7: Divide of projects in dedicated subparts (topology/ building view), perform parallel project design with several "designer", merge of results together back in root project</p>
7	Tool Diagnostic & Projects Diagnostic Wizard	<p>Project analysis to analyse of project design problems</p> <ul style="list-style-type: none"> <li>- Missing line coupler/ power supplies</li> <li>- Unused GA space, GA's</li> <li>- Estimated current consumption (overload detection)</li> <li>- Not loaded applications, and other</li> </ul> <p>Tool diagnosis to reveal out ETS problems</p> <ul style="list-style-type: none"> <li>- Visualize available tool updates</li> <li>- Low Memory</li> <li>- Wrong language coding/ missing (product) language elements within data base, ...</li> </ul>

Nb.	Item	Explanation
8	Project Tracing	<p>LH 2.3.1.1.3: Logging of information's of performed actions within ETS (with time stamp, action, user), e.g.:</p> <ul style="list-style-type: none"> <li>- Open/close of database, usage time</li> <li>- Performed action(Im- Export [Number, Manufacturer]</li> <li>- Performed downloads</li> <li>- Changed elements (Parameter, Addresses, ...)</li> </ul> <p>This function seems to be a security coverage function of installer adverse the customer (if customer demands to have the ETS project too to "adjust" his own installation a little bit by itself)</p>
9	Label Creator	<p>LH 2.3.1.1.7.2.1: Definition of freeform areas to printout and gluing afterwards device specific parameters to the installed devices. For that issue several device specific elements can be dragged to the freeform areas, as IA', SN, ...</p>
10	Find & Replace (including Exchange of Application Program and Device Replacement)	<p>Extended search &amp; replace with add on's:</p> <p>LH 2.3.2.2.6: Exchange device of manufacturer X through an similar one (exchange of 1- fold trough 2- fold push button)</p> <p>LH 2.3.2.5.8.1: Exchange (Bug Correction) of application program (S19 File) without losing the current device settings (GA's, Parameter), Quick service on SW- update from manufacturer and exchange within huge projects (&gt; 100 devices)</p>
11	Extension of Product Catalogue (Storage of self parameterized Devices within Catalogue)	<p>LH 2.3.2.5.5 User must have the possibility to integrate in a product catalogue its own defined product family or group where he can store self parameterized devices (derived from original ones)</p> <p>Only existing devices out of product catalogue can be used (registered &amp; certified). The storage exists logically separated from product catalogue, to allow possible updates of product catalogue itself (and no loss of own defined devices)</p> <p>Advantage is that customer can use very easy and quickly self configured devices.</p>