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## ETS5

### Overview of new functionality

International Training Centre Conference

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Lisbon

KNX Association, Brussels  
André Hänel

This workshop is intended to explain & show you the major changes of ETS5 (compared to the current ETS4) prior to the ETS5 release.

The workshop shall not be regarded as the final ETS5 release test.

Thanks for your understanding.

# ETS5

## Agenda

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- Why a new ETS5?
  - *Challenges*
  - *Changes*
- What's new in ETS5?
  - *IT System Environment*
  - *User Interface*
  - *Core Interface*
  - *KNX System*
  - *Various*
- Schedule
- Pricing
- Summary
- Bug Reporting
- Open issues in current Implementation
- Downloading current ETS 5

# ETS5

## Why a new ETS5 → Challenges

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### Challenges

ETS4 was launched in 2010, since then...

- Formulation of new ETS requirements (from the side of users & the KNX system, here especially the integration of KNX RF System Mode in ETS)
- Introduction of new operating systems (“tablet” concept on Win8)
- Dawning of an increasingly “connected” world (avoiding the wording “cloud” here) with the customer expecting data availability from everywhere and at any time
- ETS user expects higher performance, time savings and better (project) results for his customers
  
- **Let us evaluate if ETS 5 will meet these expectations at the end of presentation!**

# ETS5

## Why a new ETS5 → Changes

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### Changes

Changes & improvements can be spilt up into three (3) sections.

- IT System Environment
  - *OS support; installation behavior, updates, compatibility, ...*
- User & Core Interface
  - *Edit and naming behavior, views and filter, ...*
- KNX System
  - *Download performance, diagnostic capabilities, RF system integration ...*

In total ETS5 implements ~ 110.. 125 major & minor changes.

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# IT System Environment

# ETS5

## What's new in ETS5 → IT System Environment

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### Main Points

- Database “Removal”
- Installation & Setup & OS Support
- x32/x64 Mode (ETS + Apps)
- Next Generation Plug In Software
- Performance
  - *Database*
  - *Reports*
  - *New Dongle*
  - *Various*
- Manufacturer Tool

# ETS5

## What's new in ETS5 → IT System Environment

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### Database Removal

Current ETS installation is not always 'ideal'.

- Size of the setup to download
- OS preconditions for server installation
- Interference with existing/ installed PC (server) applications

### Solution

- Remove the storage principle via a "database"
- Store data in plain XML project files (indexed files → access performance)

### Notes

- Free of charge tool to restore backup from ETS4 (\*.bak) → project export
- Extra Quick Actions menu item 'Recent projects' no longer needed
- No need to convert from XML to SQL tables (import) and SQL tables to XML (export)
- Direct access to a folder with all imported *KNX Product Databases* files in ETS



# ETS5

## What's new in ETS5 → IT System Environment

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### Installation & Setup & OS Support

ETS installation is restricted to the most recent OS versions.

- Win7 SP1 x32/x64, Win8 x32/x64, Server 2008 R2 SP1 x64, Server 2012 x64
- Reduction of Setup size : ~ 50%
- Falcon is integrated part of the ETS (no COM component anymore)
- Parallel installation of ETS3/4 to ETS5 possible
- RS232 support in ETS5 discontinued
- EibLib/IP support in ETS5 continued via an ETS App  
(remark: EibLib/IP was never an released and voted specification)

### Notes

- Online access & proxy authentication
- Updates & license validation

# ETS5

## What's new in ETS5 → IT System Environment

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### x32/x64 Mode (ETS + Apps)

ETS4 is a 32- bit application → ETS5 is able to also run as a native x64- bit application

The used “mode” depends only on the activation of the *x32- compatibility module* (legacy Plug- Ins or ETS Apps).

- No need for different setups for 32/64 bit ETS5
- All ETS5 modules are natively 32- bit (as before) and 64- bit capable
- In case of 64- bit, the possibility to have > 4 GB RAM for the ETS application itself
- *x32- compatibility module* is activated via an - in ETS5 integrated, free of charge - ETS App

### Notes

- Current Windows® versions are mostly 64- bit installations, even if applications run in 32- bit
- 32- bit ETS can only use up to 4 GB RAM, while only 1 GB can be allocated for internal (copy) operations
- Plug- In compatibility module is a 32-bit component
- ETS Demo (3 devices) does not allow to run ETS Apps → here Plug- In devices cannot be used
- Available ETS Apps can be identified as x32 or x64 (to use more RAM)

# ETS5

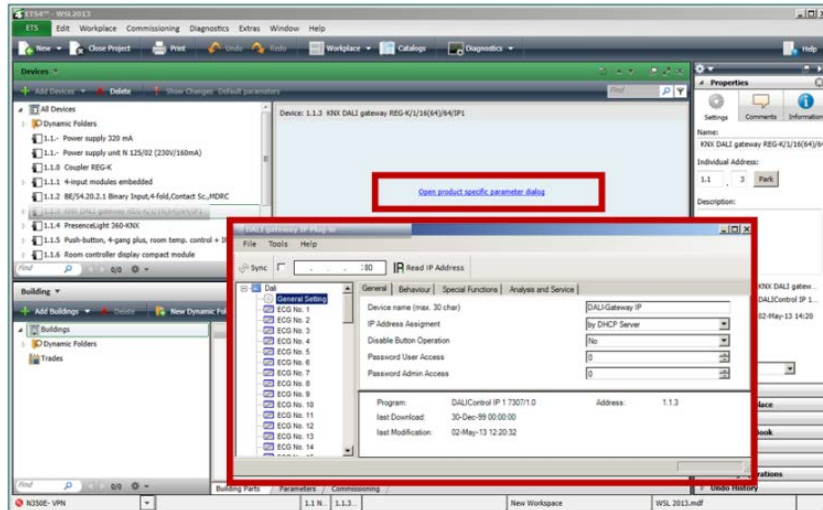
## What's new in ETS5 → IT System Environment



### Next Generation Plug In Software, #1

Since more than 10 years ETS supports Plug- ins; main reasons are:

- better (graphical) device configuration or specific download procedures
- additional device data storage & organization



Example: UI Plug- in

# ETS5

## What's new in ETS5 → IT System Environment



### Next Generation Plug In Software, #2

Technical improvements introduced in IT make Plug- in development more difficult for KNX product manufacturers:

#### IT environment (e.g. PCs and operating system)

- Compatibility (Plug- in installation on introduction of new operating systems (OS))
- Data handling (updates & performance within the compatibility layer)

#### Customer acceptance (ETS user interface and usage)

- User interface style of Plug- In and ETS user interface diverge
- Multi instance capability (capability to run the “Plug- in” parameter dialog only once in ETS → parallel download)
- Drag, drop & touch mentality since introduction of *touch* capable tablets/ smartphones

→ **constantly growing extra support\* of devices using a Plug- in**

- \* ~ 30% of current KNX support are Plug- in related issues
- ~ 20% of ETS4 development budget spent to keep Plug- Ins (also the exotic ones) alive on new OS/ ETS4

# ETS5

## What's new in ETS5; IT System Environment



### Next Generation Plug In Software, #3

What is our goal based on the (before mentioned) gained experience?

- continue to offer the ability to “program” special things in the ETS parameter dialog
- easy installation (at least easier than with current Plug- ins ...)
- faster updates & well defined update process (via KNX/ ETS APP infrastructure)
- common design style and embedded integration in ETS (as in next example)

**No “all or nothing”\* principle anymore!**

- \* If (today) a Plug-In is not available in an ETS project (e.g. because it cannot be installed);
  - the complete KNX (Plug In) device cannot be managed by ETS
  - worst case scenario : project can no longer be managed
  - in practice : substantial reconstruction & change effort through the use of replacement devices

# ETS5

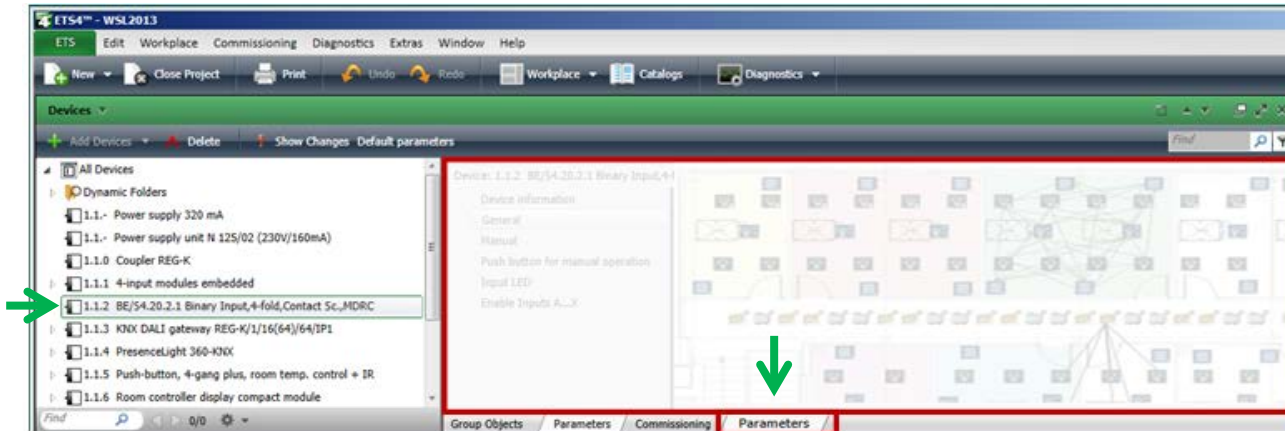
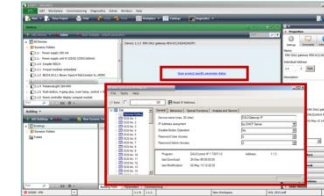
## What's new in ETS5 → IT System Environment



### Next Generation Plug In Software, #4

The new concept is:

- referred to as 'Device Configuration Apps' (DCA)
- derived from the already known ETS App concept, that solve the following issues
  - *Online update capability of installed software*
  - *Embedded UI style, multi instance capability*



# ETS5

## What's new in ETS5 → IT System Environment



### Performance #1 → database

By using the new “database free” technology and upgrading to .NET 4.5, a considerable performance improvement can be achieved in ETS5.

- Import/ export improvement by factor up to 10;
- An extra backup medium/ format is not necessary  
*(the project file is directly stored as backup, no SQL \*.bak file as on ETS4)*

*Project Hydro (~ 6000 devices)*

**ETS4 : Import 50 Seconds; Export 20 Seconds**

**ETS5 : Import 10 Seconds; Export 5 Seconds**

### Notes

- Performance improvement estimates based predominantly on the database removal (although positively affecting all project operations)
- Some minor improvements thanks to .NET 4.5 and refactoring of UI code in ETS5

# ETS5

## What's new in ETS5 → IT System Environment

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### Performance #2 → reports

By using the new “report” engine, a considerable performance improvement can be achieved in ETS5 on any kind of report.

- Generated reports speed up by factor up to 10;
- No extra report “modal window”, fully embedded in ETS UI
- *In report preview integrated collapse/ expand to display / hide device parameter and objects*

*Project Hydro (~ 6000 devices)*

ETS4 : Topology, Details → 4628 pages, 15 minutes

ETS5 : Topology, Details → 1825 pages, > 15 seconds



# ETS5

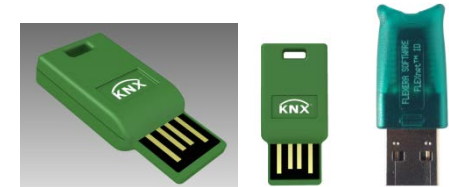
## What's new in ETS5 → IT System Environment



### Performance #3 → new dongle

By using an explicit for ETS5 new designed dongle we improve the stability of KNX tools in several major points.

- Improved usability
  - Dongle with 4 GB extra build in memory → store ETS projects directly on it (works as an USB stick)
  - Smaller footprint (28.5 mm x 13 mm x 4.5 mm) compared to the current dongle (see picture below)
  - No extra windows dongle driver software needed (cause of many support cases because of compatibility to 32/64 bit OS)
- Improved security
  - Fully encrypted communication path between dongle and ETS, no possible “in between security leak” as with an unprotected dongle driver
  - Abandoning unsecure (crackable) HOST- ID license types
- Improved performance
  - Faster access to licenses stored on dongle, stored projects, KNX product databases; increased ETS speed (especially on ETS startup → license enumeration)



Development examples

### Notes

- New dongle for use with ETS5/ MT5 only, no usage possible for older ETS/ MT version
- HOST- ID license type will be no longer supported from ETS5/ MT5 onwards

# ETS5

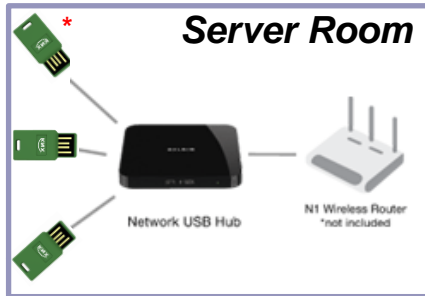
## What's new in ETS5 → IT System Environment



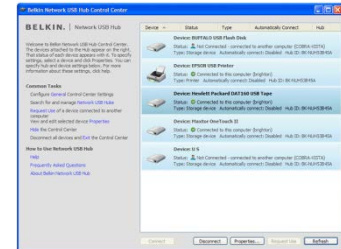
### Performance #3 → new dongle (server license)

By using an network (Ethernet) / USB hub it is easy to achieve a simple network license system for ETS5 dongles (generally also on ETS4 dongles).

- Improved usability
  - No hand out of dongles at the course start
- Improved security
  - Dongle is safely stored in server/ storage room



\* in this product example up to 15, by using 3 extra connected USB hubs



Product example only, no merchandising recommendation

### Notes

- ETS4 dongles requires an local installed dongle driver, not all network USB hubs can handle it (dongle is physically far away at USB hub from the installed driver at the local computer → runtime problems)

# ETS5

## What's new in ETS5 → IT System Environment

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### Performance #4 → various

By improving some explicit time consuming tasks we increase the work performance with ETS5.

- Calculating possible Line Coupler changes (*filter tables*) in real-time, to prevent the download of all LCs in an installation (also the non affected ones as today in ETS 3/4)
- Import without closing database (as no use of database anymore...)
- Link GAs is showing only “compatible” GOs (and not the entire list as today in ETS3/4)

# ETS5

## What's new in ETS5 → IT System Environment



### Manufacturer Tool MT5

Update to ETS5 requires an MT update.

- Multi targeting (ETS3/4/5)
- VS 2012 (Shell)
- Integrated certification document creation
- Product creation for new RF System Mode devices
- Product creation for new Coupler 920h
- ~ 60 feature requests
  - *Paste Special on "Page" level (Text, Offset,...)*
  - **Copy "static" and/or "dynamic" application parts from one (individual) application to another one**
  - *Paste "special" with more capabilities (unique number, text in parameter separators, ..)*
  - *Amount of product languages (translations) limited to the ones available in ETS*
  - **Translation of legacy products (ETS3) without MT3 and without violating the "round trip" issue**

### Notes

- MT5 will not replace an existing MT4 installation, in parallel executable

## **ETS5 Live View**

- (No) data base handling
- Export/ import of products/ projects

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**Any Questions #1 ?**

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## User Interface

# ETS5

## What's new in ETS5; User Interface

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### Main Points

- Style Guide
- Database, Project Tab & Quick Actions
- Catalogs
- New Project
- New Project Wizard
- Building Functions
- Various



# ETS5

## What's new in ETS5; User Interface

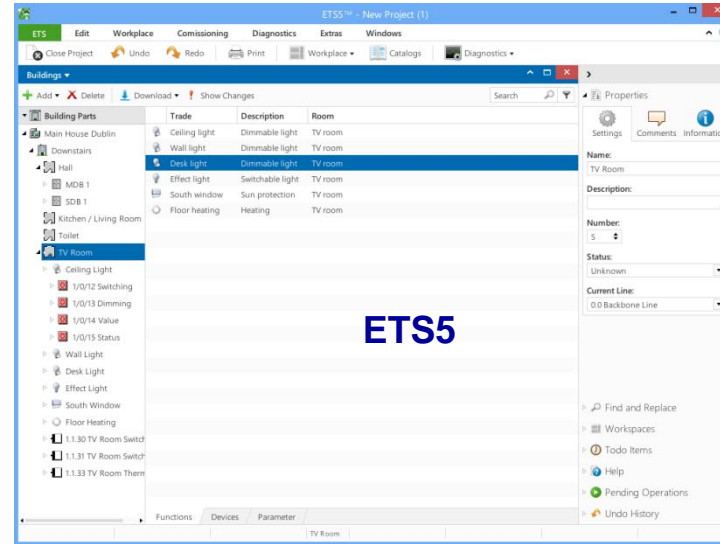
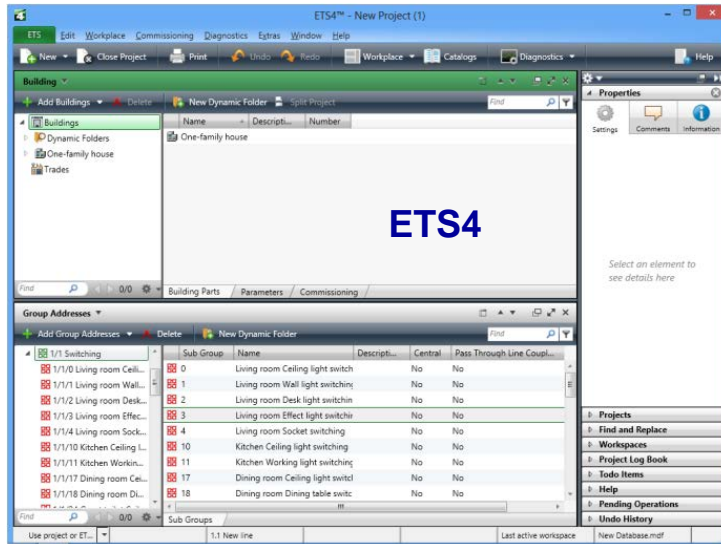


### Style Guide

- ETS5 style guide is linked to Win8 for increased workspace

### Notes

- Status Bar & Finder
- Space between lines



# ETS5

## What's new in ETS5; User Interface

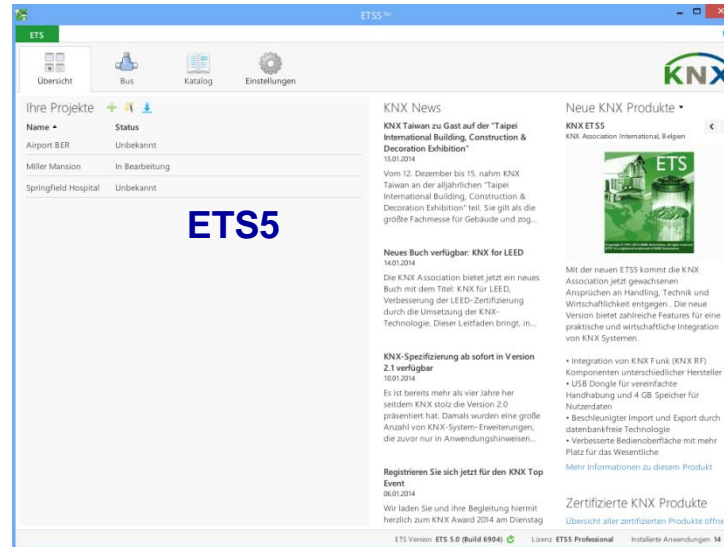
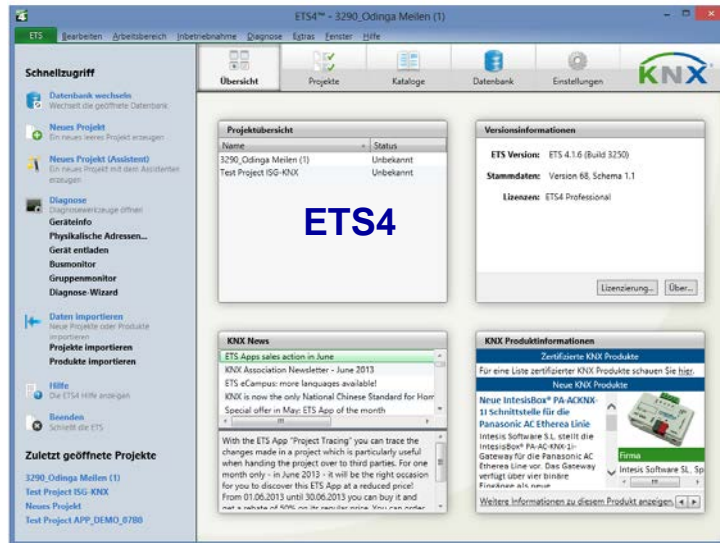


### Database, Project Tab & Quick Actions

- Removed for maximum screen size

### Notes

- Projects and Database tab removed
- Access to *Recent projects*, *Wizard*, *Help*, *Exit* better solved;

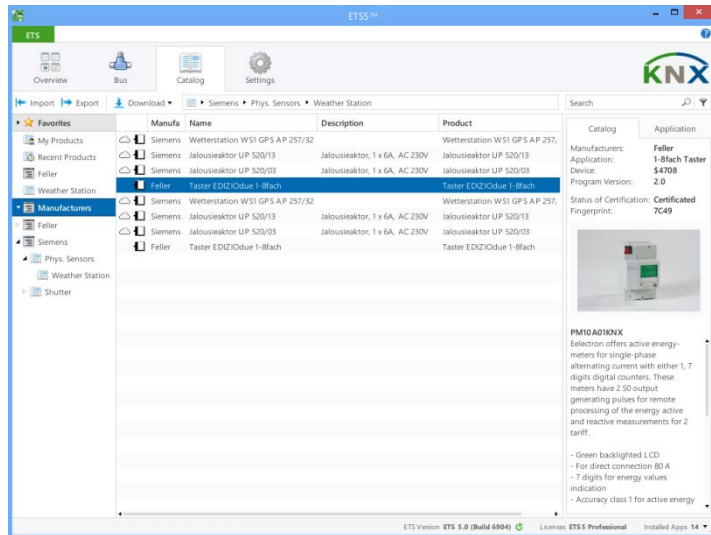


### Catalogs

- Same view as in standard *Product Finder* panel

### Notes

- Online Catalog+ (OC+) functions
- No need for importing product data separately anymore – direct access to product data



Please help us to convince KNX product manufacturers to make their product data also available via the Online Catalogue. It is a clear advantage to you as an ETS customer!

# ETS5

## What's new in ETS5; User Interface

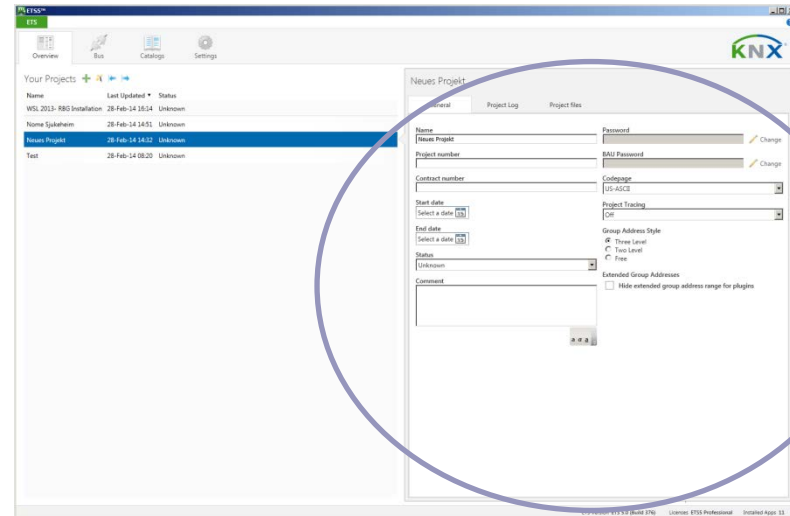
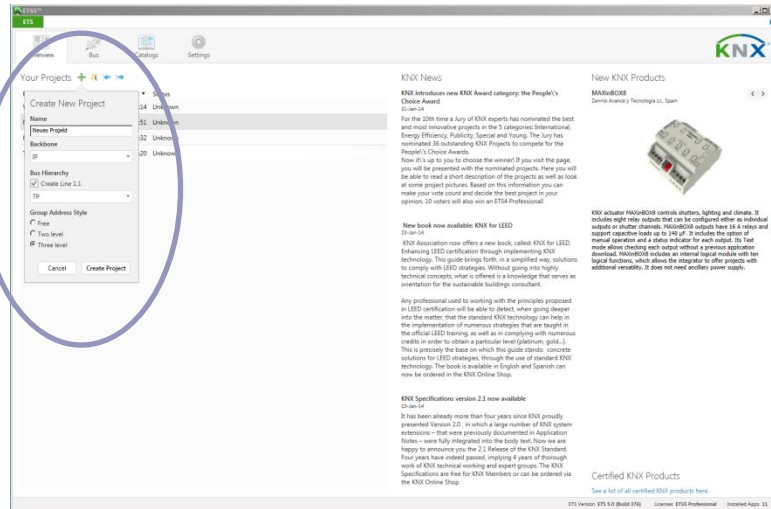


### New Project

- Reuse existing items

### Notes

- Embedded project creation
- View project details by zoom & pan in (like on a tablet)



# ETS5

## What's new in ETS5; User Interface

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### Various

- Embedded Diagnosis Wizards
  - *Workplace with tree/ list view similar to topology view today*
    - *in tree part each diagnostics function selectable*
    - *In list part the results are shown*
  - *Together with “BUS” tab usable also outside of project*
- Embedded Report Panel
  - *Similar as above*
- Removed modal dialogs (where feasible)

## **ETS5 Live View**

- Report panel
- Building view (with embedded GAs view)

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**Any Questions #2 ?**

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## Core Interface



# ETS5

## What's new in ETS5; Core Interface

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### Main Points

- New ETS App SDK for DCA Apps → see (previous) DCA concept presentation part
- New ETS App SDK for Monitor Apps
- Standard DPT Decoder
- Online Catalog+
- Falcon 3.0

# ETS5

## What's new in ETS5; Core Interface



### New ETS App SDK for Monitor Apps

ETS5 supports an extra ETS App type to decode more/ additional telegram information.

### SDK (how- to)

```
public void InspectTelegram(ITelegram telegram)
{
    // If a telegram is sent to any of the monitored addresses, decode the raw data
    if (this.monitoredAddresses.Contains(telegram.DestinationAddress))
    {
        telegram.BackgroundBrush = Brushes.White;

        // Interpret raw data of telegram
        byte[] rawData = telegram.GetRawData();
        bool snowAlarmOn = rawData[0x11] == 1;

        if (snowAlarmOn)
        {
            telegram.Info = "Snow Alarm On";
            telegram.ForegroundBrush = Brushes.Red;
        }
    }
}
```

#	Service	Flags	Prio	Source Address	Source Name	Destination Address	Route	Type	DPT	Info	ACK
1410	from bus S=0	Low	1.1.100	Device XY	0/7/7	6	Write	05 02 03 04 05 06		LL_ACK	
1411	from bus S=2	Low	1.1.100	Device XY	0/7/7	6	Write	06 02 03 04 05 06 07 08		LL_ACK	
1412	from bus S=4	Low	1.1.100	Device XY	0/7/7	6	Write	07 02 03 04 05 06 07 08 09 0A		LL_ACK	
1413	from bus S=6	Low	1.1.100	Device XY	0/7/7	6	Write	08 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E		LL_ACK	
1414	from bus S=0	Low	1.1.100	Device XY	0/7/7	6	Write	500   Off		LL_ACK	
1415	from bus S=2	Low	1.1.100	Device XY	0/7/4	6	Write	Snow Alarm On		LL_ACK	
1416	from bus S=4	Low	1.1.100	Device XY	0/7/7	6	Write	02 02   5.14		LL_ACK	
1417	from bus S=6	Low	1.1.100	Device XY	0/7/7	6	Write	03 02 03		LL_ACK	
1418	from bus S=0	Low	1.1.100	Device XY	0/7/7	6	Write	04 02 03 04   1.5282816-36		LL_ACK	
1419	from bus S=2	System	1.1.232	Dimming Central	0/0/0	6	IndividualAdi				
1420	from bus L S=3	Low	1.1.100	Device XY	0/7/7	6	Write	05 02 03 04 05 06		LL_ACK	

### Notes

- Only one decoder at a time can be active/ running.
- This ETS BETA is already available for KNX manufacturers (still ETS4)



# ETS5

## What's new in ETS5; Core Interface



### Standard DPT Decoder

ETS5 supports standard decoding of DPTs via the GA monitor.

- Logical editing of complex data types.

The screenshot shows the 'Group Monitor' interface in ETS5. At the top, there are buttons for 'Start', 'Stop', 'Clear', 'Open', 'Save', 'Print', 'Replay Telegrams', 'Options', 'Autoscroll', and 'Group Functions'. Below these buttons, the 'Group Address' is set to 257, and the 'Data point type' is '10.001 time of day'. The 'Value' field shows 'Wed' with a dropdown arrow, and the time is '14 : 22 : 19'. A dropdown menu is open, showing the following options: None, Mon, Tue (highlighted), Wed, Thu, Fri, Sat, and Sun. Below the value field, there is a checkbox for 'Send cyclically' and a 'Delay time[sec]' field set to 0. There are also 'Write' and 'Read' buttons, and a 'Received value:' field. At the bottom, there is a table with columns for '#', 'Time', 'Service', 'Flags', 'Prio', 'Source Address', 'Source Name', 'Source Desc', 'Destination Address', 'Destination Name', and 'Destination'. The first row of the table contains the following data: 1, 10.07.2013 14:20:37, Start, , , , , , , , , , , , , , .

### Notes

- According DPT definition in KNX specification 03\_07\_02

# ETS5

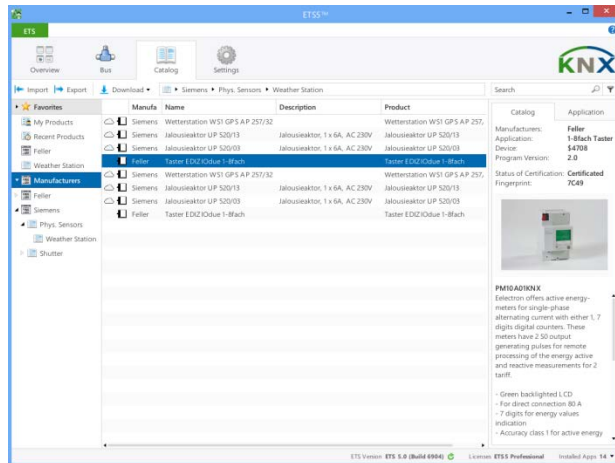
## What's new in ETS5; Core Interface



### Online Catalog +

OC+ is extended with more KNX product data information for ETS customer

- PDF file (e.g. application description), zip file (collector), picture, icon & comments



### Notes

- Maintenance via KNX administration UI
- Same info in ETS catalog dashboard tab and *Product Finder* panel for online products

# ETS5

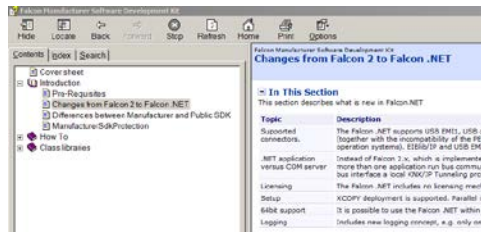
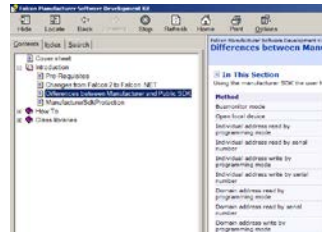
## What's new in ETS5; Core Interface



### Falcon 3.0

Complete redesign of Falcon, with new .NET SDK

- No more support for RS232, EibLib/IP support via an ETS App
- 2 levels; Customer (restricted service usage, e.g. memory write) / Manufacturer
- Each manufacturer receives its own, company “personalized” free of charge Falcon version
- KNX manufacturer is given access to the monitor interface (on current Falcon not public!)



### Notes

- Falcon 3.0 sent already to BETA testers (since May 2013)
- No COM component; each Falcon application uses its own “version”

## **ETS5 Live View**

- Online Catalog + Examples
- Standard DPT Decoder

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**Any Questions #3 ?**

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## KNX System



# ETS5

## What's new in ETS5; KNX System

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### Main Points

- RF System Mode Support
- Long Frame Support
- Coupler Modell 920 Support

# ETS5

## What's new in ETS5; KNX System



### RF System Mode Support

ETS5 supports natively integration of RF devices (like standard TP devices).

- Assignment of GAs & GOs (also between TP/ RF devices)
- Several TP(IP) to RF couplers in a installation possible
- Dedicated assigned Domain Address (DoA) per RF “Line”



### Notes

- Coupler 2.0
- Semi- bidirectional devices

# ETS5

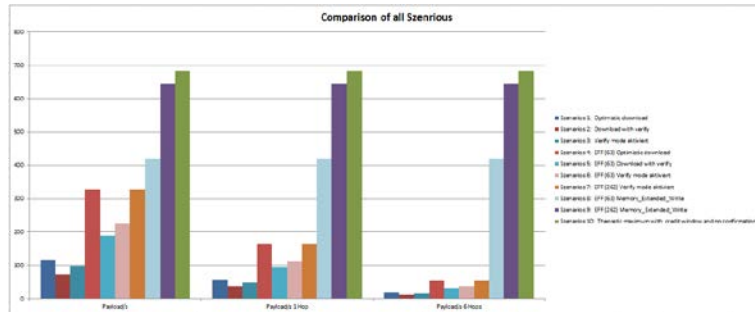
## What's new in ETS5; KNX System



### Long Frame Support

ETS5 supports LF → high speed impact on memory/ property R/W services.

- Scan algorithm to detect the possible “path” length according AN090.
- Scan result stored in ETS project data (couplers, devices/ last used length)



### Notes

- Optional disable switch in ETS5 for legacy reasons
- Diagnostic on Topology mesh capabilities possible via an ETS App; no own ETS analysis function
- Speed up download procedure ([calculation](#) made by a KNX working group, KSG)

# ETS5

## What's new in ETS5; KNX System



### Coupler Model 920 Support

ETS5 supports the new coupler model 920h.

- Intended to first cater for TP/RF couplers
- Extendable to other coupler types as given in specification document KSG 501

Secondary Side	Primary Side			
	TP1	PL110	RF	IP
TP1	yes	yes <sup>a</sup>	no	yes
PL110	yes	no	no	yes
RF	yes	yes <sup>b</sup>	no	yes
IP	no	no	no	no

<sup>a</sup> Implementations of such Coupler exist, but are not standardised. If this combination would cause problems, this model may not be supported in this paper.

<sup>b</sup> This paper does not exclude this Coupler realisation. However, it contains two DoAs: a two octet KNX PL110 DoA and a six octet KNX RF DoA. This has to be considered in the Network Configuration Procedures.

#### Legend

- yes: A Coupler Model 2.0 with this Primary Medium and that Secondary Medium is assumed meaningful.
- no: A Coupler Model 2.0 with this Primary Medium and that Secondary Medium is not assumed meaningful. Such device shall not be supported.

**Any Questions #4 ?**

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**Various**

### Various Points

- Most significant Feature Requests (out of ~75)
  - *IP routing diagnostic function (discovery of KNXnet/IP devices)*
  - *KNX interface; USB INF file support (online updateable interface [XML description](#))*
  - *Separate monitor columns for IA, Name, Description → Live Example*
  - *Adding up of bus current consumption per TP Line*
  - *Extended keyboard short cut definition*
  - *GA ex/import with '**Descriptions**'*
  - *DPT assignment to a GA (not to several GOs only)*
  - *Dynamic folders; filter according GO properties*
  - *Removal of line types X.0 as a separate element (like in ETS2) → most customers delete the “main line” → Live Example*
  - *Buildings; location of “Cabinet” in a “Room” possible → Live Example*
  - *Search with “\*” and “?” + replacement for selection only*
  - *Internet access; proxy with authentication (often used in larger KNX member companies)*
  - *Extended parameter preview on multi selected devices (standard value versus individual value) → Live Example*

## **ETS5 Live View**

- Monitor Columns
- ETS Topology, no X.0 Line View
- ETS Topology, rooms in rooms



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**Any Questions #5 ?**

# ETS5

## Schedule

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### Time Line

- ETS5 was announced to the public on L+B 2014 (with overwhelming positive feedback)
- A beta test phase is planned from June 2014 onwards for maximum two months.
- The release is scheduled for October 2014 (at least in the languages of DE/ EN, if feasible also in NL, IT, FR, ES)
- All remaining languages (currently 17 in ETS4) will be updated at the latest in 05/2015

## ETS5 Pricing

# ETS5 Pricing



Tool Edition	New Full Price*
ETS5 Professional Edition	1.000 €
ETS5 Lite Edition	200 €
ETS5 Supplementary Edition	150 €

Tool Edition	New Update Price*
ETS4 Professional Edition Update	350 €
ETS3 Professional Edition Update	600 €
ETS4 Lite Edition Update	100 €
ETS4 Supplementary Edition Update	100 €
ETS4 Lite Edition <b>Upgrade</b> (Lite → Professional)	800 €
ETS4 App Edition Update (separate dongle for App)**	60€

\* including a dongle

\*\* today each ETS App is explicitly tied to the ETS Professional Edition **dongle**

## Buy ETS4 Professional and receive the update of the license to ETS5 for free at release!

- *ETS5 has been announced during the light+building fair and will be available around October 2014. Still, do not hesitate to buy ETS4 Professional now.*
- *When buying a new ETS4 Professional license or an update from ETS4 Lite to ETS4 Professional regular price (updates from ETS3 or new ETS4 Supplementary licenses are not valid for this action) you will also receive the update of the license to ETS5 Professional free of charge when released (new ETS5 Dongle needs to be purchased however, +€60) .*
- *More information about this offer and how to benefit from it, see [KNX Online Shop](#) (menu SPECIAL OFFER).*

# ETS5

## Summary

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### ETS5 Catchphrases

Next ETS5 has a lot of improvements, here again grouped according:

#### Infrastructure

- Database (removal)
- 64- bit capability
- Improved performance
- New dongle
- Next generation Plug- in software (DCA)

#### User Interface

- Improved ETS user interface (increased working area)
- Online catalog + (more information on KNX product databases of manufacturer)

#### KNX System

- New KNX RF System Mode integration
- Support of KNX long frames (enhanced download performance)
- Support of new coupler model

Presentation done at L+B 2014, availability for end customers from 10/2014 onwards.

# Bug Reporting

# ETS5

## Report Bugs/ submit Comments during Conference



We will not use the current KNX support chain during this workshop ...

### Where to report bugs/submit comments?

Link: <https://tfsvs.ise.de/tfs>

User : ise\KnxTrainingCentre

Password: Osaweheda892

### How?

1. Create a **Bug** report (same approach for comments/ hints) under the area

Area: KNX/TWS

DETAILS	
Effort	
Severity	3 - Medium
Area	KNX\TWS
Backlog Priority	

Iteration: KNX\ETS 5.0\Testworkshop

2. Define a subject **“Title”** and specify **“Found By”** (your first/ last name)
3. Add any textual data (e.g. attachments and **ETS5 log**) and save the report



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## **Open issues in current implementation**

# ETS5

## Open items currently not implemented

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Following items/ functions are currently not fully implemented.

1. *Change ETS UI languages in settings → translations are not yet available*
2. *Change lowest number of GA in two/three level structure (0/0/11 results in 0/012)*
3. *Catalog root level, display all devices from all manufacturers*
4. *Project overall copy operations (e.g. from project A → B)*
5. *Project log files & project additional files*
6. *UI of “Bus Tab”; only connection part is working*
7. *UI of connection manager in status bar*
8. *Workspaces*
9. *Find & Replace*
10. *Recent Products*
11. *Project root → using the same element twice e.g. in **Topology** and **Group Addresses** (MS bug)*

*All currently known bugs are described in the release notes (how to get them, see some slides later).*

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## ETS5 Download

# ETS5

## Report Bugs/ Comments from Conference

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Download the newest ETS5 test software by typing in the link below in IE or Firefox

### Where

Link Software: <https://update.knx.org/test/ETS50/ETS5.0.515Setup.exe>

Link Release Notes: <https://update.knx.org/test/ETS50/TCTWS-ReleaseNotes.pdf>

Link License: <https://update.knx.org/test/ETS50/TCTWS.license>

(Firefox opens and display this as a text file, please save the content as file via “save as”)

### To Do

- Uninstall old ETS5 (Build 503) → via control panel
- Download and execute the new ETS5 setup from the link above
- Download the license file from above and install it → plug in the dongle, open license dialog

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**Any Questions #7 ?**

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I am looking forward to getting my personal copy of ETS5, are you??

**Thanks for your attention!**