

Perytons™ Release Notes Version 3.2

Release information

- Current version: 3.2
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN SDK
- Release date: July 30, 2010
- Previous major version: 3.11 (April 24, 2010)

Major new features

- Support Freescale MC1322x USB dongle as capture device (for Peryton-S and Peryton-D)
- Support Texas Instruments CC2531 USB USB dongle as capture device (for Peryton-S)
- Support OKI 802.15.4/ZigBee USB dongle as capture device (all models)

Minor new features

- Split the SDK license to developer license and user license. Only developer can create new valid projects, and both developer and user can use these projects with their analyzer
- Allow to have STMicroelectronics modules on the analyzer computer who are used by other applications or having different (not analyzer) firmware
- Improve FTDI interface performances (ST Microelectronics modules)
- Use the 'Auto Add to Message View' also when Rules are running
- Pack workspace saves only active rules
- Make the refresh dongles to work quicker
- Allow to change message view table columns while in search tabs
- Allow to move existing bookmark to a new location
- Show capture hardware type in file statistics (may not be accurate for files captured with old analyzer versions)
- Use NWL AUX Header source address for APS decipher if device long source address is unknown

Bug fixes

- Fix some bugs in 6LoWAPN (RFC 4944) UDP header compression
- Fix a bug not reading all messages from capture file when auto-save has been used
- Fix a problem when using the analyzer from a user account with no administrator rights
- Fix a problem with position of timestamp when using STMicroelectronics modules
- Fix timestamp bug when using new driver for Indentation dongles ('IntegrationNew' in the capture box)
- Fix problem showing dotted lines on screen during capture in bizarre cases
- Don't process attribute value and type on bad status
- Fix bug with ST statistics channel number
- Fix problem with IASACE Cluster server commands
- Fix bug in SE pricing when price is 0x0ffffff
- Fix a bug swapping between server and client commands in messaging cluster
- Improved warning when opening non valid capture file
- Fix a bug added in build 742 causing passive activity scan not to work with Integration dongles

Perytons™ Release Notes Version 3.11

Minor Release information

- Current version: 3.11
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: April 24, 2010
- Previous major version: 3.1 (March 8, 2010)

Major new features

- Add table mode to Message View allowing to see message fields in a table
- Add Message Tree View allowing to see message fields in XML like mode, where selected field is highlighted over the hex data
- On-Line file converter (<http://www.perytons.com/downloads.html>) to convert Daintree, TI and Wireshark capture files to Perytons capture file format
- Add 6LoWPAN draft-ietf-6lowpan-hc-06 header compression

Minor new features

- Stop processing upper layers when receiving Perytons sync message
- Stop processing upper layers if MAC deciphering failed
- Add Green Energy NWL header format
- Keep last Time View grouping used
- Support multi-channel and diversity capture with ST Microelectronics modules (require STM32W Firmware version 1.1)
- Show RSSI values as signed (dBm) when using STM32W module as capture device
- Update Health Care profile to revision 13, March 2010
- Add Hex indication prefix to preferences
- Add a way to choose if values are displayed as Hex or as Decimal
- Add number of bits in a bit field to the Message View hint
- Add Layer and Type fields to the Message View Info section summarizing the message type (e.g. APS command)
- Change the Auto Sync method, now choosing Auto Sync in a window will enable highlighting messages in **that** window when pressing on device or message in **another** window

- Fix a bug displaying wrong MIC value in some cases

Minor bug fixes

- Fix a bug in the way signed values are displayed
- Fix a bug in RSSI location data response command
- Fix warning in 6LoWPAN if payload is longer than 256 bytes (after defragmentation)
- Fix bug with the auto increment of capture file name index
- Fix a bug in the binary display of values
- Fix bug in Time View search when 'from message' > 0
- Don't consider 0xFFFE as a valid short MAC address

Known issues

- draft-ietf-6lowpan-hc-06 – shared content and shared link prefix are not supported

Perytons™ Release Notes Version 3.1

Release information

- Current version: 3.1
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: March 8, 2010
- Previous minor version: 3.05 (February 10, 2010)

Major new features

- Improved security management, keep keys as part of the capture file
- Add 6LoWPAN draft-ietf-6lowpan-hc-06 (beta)

Minor new features

- Add OTA (Over The Air) update cluster for ZigBee SE
- Messages that failed the decipher process, will be marked as red (and not as yellow), and will not be further processed
- Update ZigBee Vendor ID list (December 09)
- Improve the way IAI dongles are managed
- Add ZigBeeAllianc09 as default master key (hard coded)
- Use device file long addresses for deciphering MAC messages with short address

Minor bug fixes

- Improve the way NWL source address is used for short-long address association
- Use ZDP device type
- Swap RFD and Router icons to match the legend
- Fix a bug in ZDP management LQI response command structure
- Fix a bug with Stub NWL
- Messages that failed the decipher process, will be marked as red (and not as yellow), and will not be further processed
- Fix a bug in RF4CE long-short address association taken from pair message

Backward compatibility

- ANL files opened with this version will be automatically converted to a new file format. These files as well as ANL files captured with version 3.1, can't be opened by older versions of the analyzer

Perytons™ Release Notes Version 3.05

Release information

- Current version: 3.05
- Version options:
IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: February 10, 2010
- Previous versions: 3.0 (January 20, 2009)

Major new features

- Support ST Microelectronics module as additional capture device for 2.4GHz
- Add ZigBee SE 1.1 (Smart Energy) profile - Beta
- Add ZigBee HC (Health Care) profile - Beta
- Add ZigBee TA (Telecom Application) profile - Beta
- Add capture Start / Pause / Stop icons to main toolbar

Minor new features

- Add auto expand option to the Message View window
- Auto increment capture file name every new capture
- Add more columns to the Network Keys form
- Add spaces to the 11073 tunneled data display

Minor bug fixes

- Fix few APS encryption problems
- Fix a bug with the SE key calculator crashing if some DLLs are missing on the target PC
- Fix a bug with ZigBee long octet string
- Fix bug with link status messages not generating Network View connection
- Don't crash on pressing Cancel in the search for activity form while noise measurement is in progress

Perytons™ Release Notes Version 3.0

Release information

- Current version: 3.0
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: January 20, 2010
- Previous versions: 2.56 (December 1, 2009)

Major new features

- Add ZigBee HA (Home Automation) December 2009
- Add ZigBee CBA (Commercial Building Automation)
- Update statistics on the fly, change statistics charts to be a window
- Allow to open .ANL file by double click on the file with Windows Explorer

Minor new features

- Add SE hash calculator (convert installation code to initial link key)
- Add windows icons to main toolbar allowing to open windows directly from toolbar
- Add field search to search form
- Support RF4CE encryption for messages with only short address
- Use RF4CE pair messages for short-long address association
- Allow to reset statistics from Rule, and to have statistics per channel in rule

Minor bug fixes

- Fix a bug in MAC command section
- Fix bug in not comparing text strings in message compare
- Don't include ZDP in case of group transmission
- Fix bug in decoding bit fields that doesn't have parent field

Backward compatibility

- New activation code method is used, user need to receive new activation code from Perytons
- Access to MAC destination and PAN addresses by SDK has been changed

Perytons™ Release Notes Version 2.56

Release information

- Current version: 2.56
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: December 1, 2009
- Previous versions: 2.55 (October 19, 2009)

Major new features

- Mark the relevant RF4CE channels in the capture form
- Support AN SubGhz dongles

Minor new features

- Add device name (if known) to the Device section in Message View
- Add RF4CE example
- Allow to choose dongle synchronization channels
- Allow to save and load searches

Minor bug fixes

- Don't crash if Rule folder set in Preferences doesn't exist
- Fix Time View scroll position in continuous capture
- Fix RF4CE encryption issues

Perytons™ Release Notes Version 2.55

Release information

- Current version: 2.55
- Version options:
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed
 - IEEE802.15.4, ZigBee, ZigBee RF4CE, 6LoWPAN licensed for free evaluation
- Release date: October 19, 2009
- Previous versions: 2.54 (September 21, 2009)

Major new features

- Add RF4CE CERC (Consumer Electronics Remote Control)
- Add active time sync for long multi channel captures that needs time accuracy

Minor new features

- Fix few minor bugs in RF4CE message decoding
- Improve Network View auto zoom
- Add dongle synchronization options to preference
- Add RF4CE device type + icons, Vendor ID, and profiles
- Fix Time View scroll position in continuous mode where Freeze button is pressed

Minor bug fixes

- Fix a bug crashing on cyclic buffer when old messages were removed due to cyclic buffer duration rather than cyclic buffer length
- Fix a bug not showing last message captured in Real Time until next message is captured
- Fix problem in making off-line capture without running any Real Time capture first

Perytons™ Release Notes Version 2.54

Release information

- Current version: 2.54
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP, 6LoWPAN licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP, 6LoWPAN for free evaluation
 - ZigBee RF4CE (Beta) licensed
 - ZigBee RF4CE (Beta) for free evaluation
- Release date: September 21, 2009
- Previous versions: 2.5 (May 28, 2009)

Major new features

- Add RF4CE
 - Analyze RF4CE (March 2009) NWL messages
- Automatic check for new versions available over the web
- Add icons to device view, show pairs
- Monitoring Rule improvements
 - Allow rule to access preferences
 - Allow rule to access computer resources (e.g. UDP)

Minor new features

- Add time view connections for association, pairing and ping messages
- Show hint on time view connection including connection type and latency



- Identify message view fields added by the analyzer
- Add example of UDP rule
- Allow to set device name and key from the device view screen
- Add device file and floor plan to real time capture
- If rules are active an indication on the main window title and active capture icon will be shown

Minor bug fixes

- Fix a bug reading .anl file longer than 12M messages

Perytons™ Release Notes Version 2.5

Release information

- Current version: 2.5
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP, 6LoWPAN licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP, 6LoWPAN for free evaluation
- Release date: May 28, 2009
- Previous versions: 2.3 (March 1, 2009)

Major new features

- Add 6LoWPAN
 - Analyze 6LoWPAN messages
 - Export IP payload to WireShark
- Monitoring Rule improvements
 - Enhanced editor with Intelisense
 - Find and replace in rule
 - Support bookmarks when editing rule
 - Sign rules to allow users with no monitor license to use rules
 - Allow rule to set message name in Message View
 - Allow rule to set Network View device icons
 - Allow rule to override Message View structure (hide fields, change names etc.)
 - Note that building statistics charts from rules are not backward compatible with 2.3. For further assistance contact Perytons support
- Analyzer preferences
 - Allow user to change the Perytons analyzer properties (colors, parameters etc.).
- Endless capture
- Continuous search
 - Allow search results to update during Real Time capture by running the search criteria on newly added messages
- Auto-add messages to Message View

One button allowing adding all messages captured to Message View during Real Time capture

- Add help icons to major windows

Allow to get on-line help for specific windows without having to search the user manual.

Minor new features

- Improve the way small number of devices are positioned in Network View
- Show an icon when new messages are written to Event Log
- Allow to automatically load export data result with another program (e.g. Excel)
- Improve dongle time drift compensation
- Improve memory consumption when analyzing long captures

Minor bug fixes

- The status line in the capture form is visible again
- Activation problem when changing regional date settings has been solved

Perytons™ Release Notes Version 2.3

Release information

- Current version: 2.3
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS, ZigBee ZDP for free evaluation
- Release date: March 01, 2009
- Previous versions: 2.2 (December 7, 2008), 2.22 (February 3, 2009)

Major new features

- Add ZigBee ZDP
- Diversity in Real Time capture
 - Real-Time capture can now work with diversity
- Security
 - Master key decryption and authentication for MAC 802.15.4 and ZigBee NWL
- Monitoring rules features
 - Allow rule to set the color of Time View messages
 - Allow rule to move messages to message view
 - Allow rule to expand specific message fields

Minor new features

- Add date to event window events
- Don't allow very small floor plan images (under 200 pixels)
- Add warning when opening workspace that contains rules with analyzer version without Monitoring license
- Change the "anchor" icon color so it will be more visible
- Show device name (if applicable) in Network View, Split name and address in Network View filter
- Add warning color to time view
 - Messages that had some protocol warning (e.g. illegal field value) will be marked in yellow
- Screenshot in pack workspace
 - Analyzer screenshot was added to the files packed by the pack workspace command

- New event notification

When new event is written to the event logger, a notification will be displayed in the main window, allowing for quick browsing to the event log window

- Signing rule

With Peryton Monitor the user can now sign a rule. Any user of the Perytons analyzers can use the rule but can't modify it

Bug fixes

- Time View vertical scroll in Real Time

In some cases Time View vertical scroll didn't update well

- Crash when selecting 1 sec as max capture time
- Crash when exporting single message to file
- Don't crash on empty rule file
- Fix a crash when no search results found
- Solve problem with duplicated Real Time capture channel numbers in Time View
- Fix some dongle drift problems in very long captures
- Fix bug with ZigBee NWL Link status
- Fix bug in field names displayed in warning hint (duplicate prefix)
- Fix bug in message view horizontal scroll when message filter changes
- Export from range is now in user numbers and not analyzer indexes

Perytons™ Release Notes Version 2.22

Release information

- Current version: 2.22
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS for free evaluation
- Release date: February 01, 2009
- Previous versions: 2.2 (November 5, 2008)

Major new features

- Diversity in Real Time capture
 - Real-Time capture can now work with diversity

Minor new features

- Add date to event window events
- Don't allow very small floor plan images (under 200 pixels)
- Add warning when opening workspace that contains rules with analyzer version without Monitoring license
- Change the "anchor" icon color so it will be more visible

Bug fixes

- Time View vertical scroll in Real Time
 - In some cases Time View vertical scroll didn't update well
- Crash when selecting 1 sec as max capture time
- Crash when exporting single message to file
- Don't crash on empty rule file
- Fix a crash when no search results found
- Solve problem with duplicated Real Time capture channel numbers in Time View
- Fix some dongle drift problems in very long captures
- Fix bug with ZigBee NWL Link status

Perytons™ Release Notes Version 2.21

Release information

- Current version: 2.21
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS for free evaluation
- Release date: February 01, 2009
- Previous versions: 2.2 (November 5, 2008)

Major new features

- Diversity in Real Time capture
 - Real-Time capture can now work with diversity

Minor new features

- Add date to event window events
- Don't allow very small floor plan images (under 200 pixels)
- Add warning when opening workspace that contains rules with analyzer version without Monitoring license
- Change the "anchor" icon color so it will be more visible

Bug fixes

- Time View vertical scroll in Real Time
 - In some cases Time View vertical scroll didn't update well
- Crash when selecting 1 sec as max capture time
- Crash when exporting single message to file
- Don't crash on empty rule file
- Fix a crash when no search results found
- Solve problem with duplicated Real Time capture channel numbers in Time View
- Fix some dongle drift problems in very long captures

Perytons™ Release Notes Version 2.2

Release information

- Current version: 2.2
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS for free evaluation
- Release date: November 5, 2008
- Previous versions: 2.1 (August 5, 2008)

Major new features

- Real Time capture
 - Real-Time capture and playback capture modes added.
- Monitoring rules
 - Monitoring rules allowing marking messages of interest, generate alerts, and build customized statistics charts. Monitoring rules are also available in the free evaluation version.
- Max capture time increased from 30min to 24 hours
- Welcome screen added to help experiencing the analyzer features

Minor new features

- Select all in Time View
 - Allowing selecting all messages and easily dragging them to Message view window
- Message View scroll supports the mouse wheel
- Fix dongle time drift
 - In long captures, the dongle clock drift is compensated according to the PC time

Perytons™ Release Notes Version 2.1

Release information

- Current version: 2.1
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS for free evaluation
- Release date: August 5, 2008
- Previous versions: 2.0 (May 5, 2008)


Major new features

- Free evaluation

Free evaluation features were extended. 500 messages are supported, channel selection is allowed. 4 dongles and diversity are allowed.
- Sample files


Additional sample files were added to the installation.
- Message links

Related messages in Time View (e.g. message-ack, or sequential relay messages) can be connected with line.


- Ack processing

Ack message ID is now found by finding the message the ack is in response to
- One button share

Allow to zip all workspace files (.wrk, .anl, .anv) into one zip file and send to colleagues for further analysis.



Minor new features

- Message View Msg section

Msg section in message view now has the color according to message status.
- Time difference in message compare

When comparing two messages, a hint was added showing the time difference between the messages

Msg	Dev	Index	LongMAC	Type	SM	SP	Neighbors	Status
6	23	23	0111:0000	Un	0000	0111	217	Ok
7	22	22	0111:0001	Un	0001	0111	22	Ok

Message number
Time diff: Start-Start:10.608msec End-Start:7.824msec

- Message View color gradient

Fields that share the same byte/word field now has the same color, while other fields of the same section will have related colors with color gradient

Msg	Dev	Mac	Data	Header	FType	Sec	Pen	AckR	CPan	R1	DMode	Ver	SMode	Seq	DPanId	DstAdd	SrcAdd	FCS
71	15		29		D	N	N	N	Y	0	S	06	S	84	666C	FFFF	0000	ok

- Select all

“Select all” in Message View is now enabled if there are messages in message view tab – no need to select message for that

Backward compatibility

- Solve bug in activation if disk on key is plugged

In some cases you may need to ask for an activation key reset from Perytons. If you face any license problems after the upgrade please contact support@peryttons.com

Bug fixes

- Fix bug in capture passive scan
- Solve a bug dragging messages to message view – sometime the first message is wrongly selected
- Fix memory problem when opening many search tabs
- Fix bug in message compare when last field only exists in one message
- Don't send exception if input file has header but no messages
- Fix bug in network layer command
- Fix message order when copy message view to clipboard
- Solve problem with the message view horizontal scroll bar

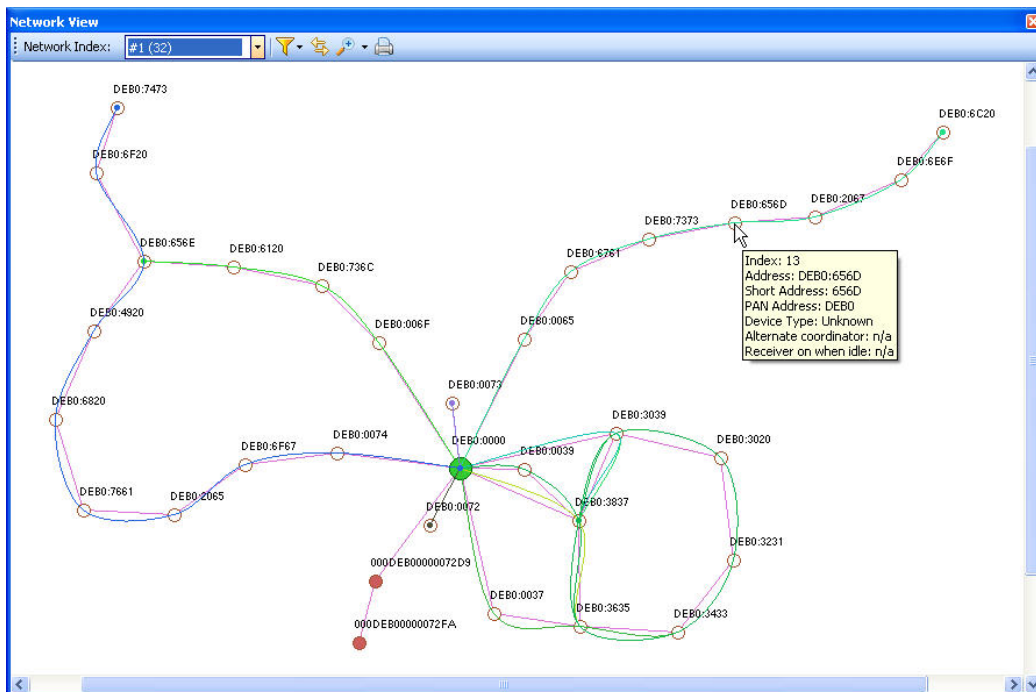
Perytons™ Release Notes Version 2.0

Release information

- Current version: 2.0
- Version options:
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS licensed
 - IEEE 802.15.4, ZigBee NWL, ZigBee APS for free evaluation
- Release date: May 5, 2008
- Previous versions: IEEE 802.15.4 version 1.6b licensed and version 1.6b for free evaluation (February 20, 2008)

Major new features

- ZigBee
 - Support ZigBee NWL (network layer) and APS (application support) layers
- Network View
 - Network View has been added showing network topology, devices, connections and routes



- Device View
 - Device View has been added showing tabled with all devices found and all known properties for each device

Index	Network	Name	LongAdd	ShortMAC	ShortPAN	Neighbors	InfoSource	LongP...	Type	ieee	Mains	AllCord	RxOn	NeighborList
1	2	Beacon#4	0001:4000	4000	0001	0	Direct		Coordinator	n/a	n/a	n/a		
2	2	Beacon#2	0001:2000	2000	0001	0	Direct		Coordinator	n/a	n/a	n/a		
3	2	Beacon#1	0001:1000	1000	0001	0	Direct		Coordinator	n/a	n/a	n/a		
4	2	Beacon#3	0001:3000	3000	0001	0	Direct		Coordinator	n/a	n/a	n/a		
5	1		DEB0:0000	0000	DEB0	11	Direct		Coordinator	737520726F662064	n/a	n/a	n/a	8,5,6,9,16,18,26,27,1
6	1	FreeScale	000DEB00000072...	0101	DEB0	1	Direct		RFD	6E6F6C2065687420	No	No	No	5
7	2		000DEB00000072FA		DEB0	0	Direct			n/a	n/a	n/a		
8	1		DEB0:0072	0072	DEB0	1	Route			n/a	n/a	n/a		5
9	1		DEB0:0073	0073	DEB0	1	Route			n/a	n/a	n/a		5
10	1		DEB0:6C20	6C20	DEB0	1	Route			n/a	n/a	n/a		11
11	1		DEB0:6E6F	6E6F	DEB0	2	Route			n/a	n/a	n/a		10,12
12	1		DEB0:2067	2067	DEB0	2	Route			n/a	n/a	n/a		11,13
13	1		DEB0:656D	656D	DEB0	2	Route			n/a	n/a	n/a		12,14
14	1		DEB0:7373	7373	DEB0	2	Route			n/a	n/a	n/a		13,15
15	1		DEB0:6761	6761	DEB0	2	Route			n/a	n/a	n/a		14,16

- Add device info to Message View

Device information section was added to the message properties shown in Message View



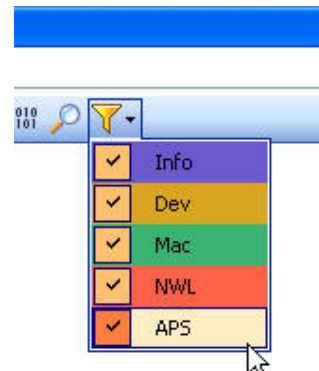
Minor new features

- Message View field selection

Each of the Message View sessions can be disabled from view

- Device index in time View

Device index was added to the possible Time View grouping criteria



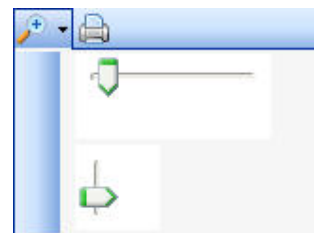
Modifications

- Icons

Some Icons were moved from top menu to the Time View menu

- Zoom

Time View zoom window has been removed. Zoom option was also removed from the Time View menu. Instead a zoom icon was added to the Time View toolbar



- Print

Print and Print Preview were moved from the File menu to Time View menu

- Progress bar

Current task name added to progress bar, bar was shifted to the right

- Protocol extension

When opening a new file, or changing workspace settings, there is a new selection box allowing to choose the desired protocol (802.15.4, ZigBee NWL, ZigBee APS)

- Message number

Message number in message view window was separated from info section to a new section

- Message source address

Message source address, as shown in Time View hint, and in Time View vertical axis when using source address grouping, is not taken from the specific message, but from the last association message related to this PAN:ShortAddress combination

- Sample files

Added ZigBee sample files

Backward compatibility

- Field expansion status

Since message sections in Message View were changed, the messages expand/collapse status saved in old workspaces will not be kept if opened with this version.

- Protocol extension

Old workspace doesn't keep protocol extension. When opening old workspaces, the default protocol will be 802.15.4

Bug fixes

- Fix bug with auto sync when having few prop win tabs with a single message in each
- PHY bytes added to statistics