estos ECSTA for Bluetooth
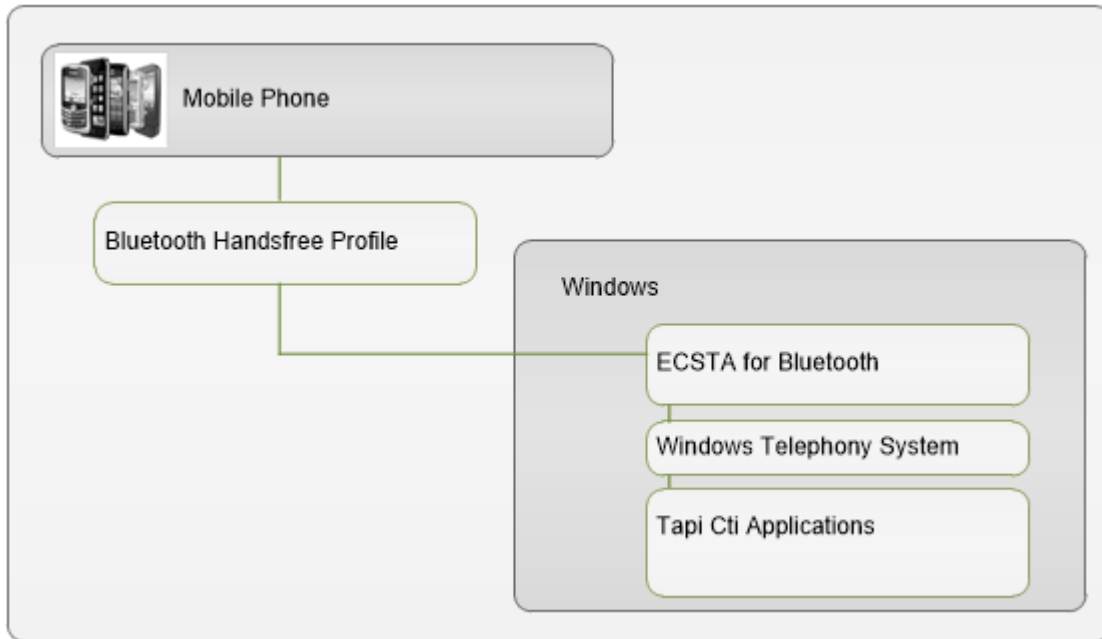
4.0.10.4735

1   Introduction

estos ECSTA for Bluetooth makes available a Telephony Service Provider for Microsoft® Tapi 2.1 (also 2.2 and 3.0). This Tapi driver establishes a communication between a PC and a mobile phone. The mobile phone may then be controlled from the PC and the phone status is available on the PC.
The estos ECSTA for Bluetooth driver uses the Bluetooth Handsfree Protocol to communicate with the mobile phone. The driver is compatibel with all mobile phones supporting Handsfree Profile Version 1.5 or newer.

For the installation and management of the driver see driver Management.

1.1   TAPI Lines

Enter the lines that the Tapi driver should provide as Tapi lines. You may add mobile phones that are paired with the PC using blueooth.

Supported Telephones
Es werden alle Telefone unterstützt, die das Bluetooth Handsfree Profil unterstützen. Dieses Profil wird auch im Auto eingesetzt, wenn das Telefon an eine Freisprecheinrichtung angeschlossen ist.

Add a device
Führen Sie zunächst die Bluetooth Kopplung des PC mit dem Telefon durch. Nachdem das Telefon mit dem PC gekoppelt ist, können Sie das Telefon als Gerät hinzufügen.

Phone Number Format
The phone numbers should be entered fully international, for example *+15551234567123*.

Attention
After the installation of the driver it may be necessary to restart the computer.

1.2   Advanced Settings

Format der Leitungsnamen
Mit dieser Option wird festgelegt, wie dei Tapi Leitungsnamen angezeigt werden.
Standard - Nur Rufnummer - Nur Name

Phone Number Format
In desem Dialog kann eine erweiterte Formatierung der Rufnummern vorgenommen werden. Siehe
Rufnummern Formatierung.

1.3   Licenses

The driver can be tested without license for 45 days with 25 lines. After the trial period, the lines can no
longer be controlled and monitored. You can purchase license keys that unlock the driver permanently. To
purchase licenses, contact your dealer.

The driver can be configured any number of lines. Opening a line consumes a license. If the existing licenses
are used up, opening further lines will fail.

2 Phone Number Format

You may enter rules for formatting the phone numbers.

The phone numbers that are reported from the PBX system to the PC and the numbers that are send from the PC to the PBX system may be modified with a Search and Replace function.

The phone numbers that are sent from the Tapi Application to the PBX (make call) may be modified as well.

Each line in the list contains an option if direct text compare or a regular expression is used.

The Search and Replace function uses regular expressions. If a search pattern matches, the result from replace with will be used as output. It the search pattern does not match, the original number will be reported unchanged. The entries in the list are processed one after each other. If one match is found the remaining enties will be ignored.

There are three categories:

- Incoming
  This section is for phone number from incoming calls that are reported from the PBX system to the PC.
- Outgoing
  This section is for phone number from outgoing calls that are reported from the PBX system to the PC.
- PC Dialling
  This section is for phone numbers that are dialed on the PC and send to the PBX system

Search for:
Enter the regular expression that will be used to find a phone number.
Hint: The caret (^) can be found on the upper left key of a keyboard with German layout.
An overview of allowed expressions:

Character	Description
^	The beginning of the search string (phone number). The expression "^0" matches '0' only at the beginning of the search string.
^	The caret (^) immediately following the left-bracket ([) has a different meaning. It is used to exclude the remaining characters within brackets from matching the target string. The expression "[^0-8]" indicates that the target character should not be 0
$	The dollar sign ($) will match the end of the string. The expression "152$" will match the sub-string "152" only if it is at the end of the string.
|	The alternation character (|) allows either expression on its side to match the target string. The expression "1|2" will match '1' as well as '2'.
.	The dot (.) allows any character (or any number).

*	The asterix (*) indicates that the character to the left of the asterix in the expression should match 0 or more times.
+	The plus (+) is similar to asterix but there should be at least one match of the character to the left of the + sign in the expression.
?	The question mark (?) matches the character to its left 0 or 1 times.
()	The parenthesis affects the order of pattern evaluation and also serves as a tagged expression that can be used when replacing the matched sub-string with another expression.
[]	The corner brackets ([and]) indicates the amount of signs that are permitted at this point.

Replace with:
Enter the expression that defines how the number is to be formatted.
\1 represents the first matched expression enclosed by parentheses '( )' from the *search pattern* field.
\2 the second ...

Check:
You may check your expressions right here by entering a phone number in the indicate field. The resulting output will be displayed. If the expression from the search pattern is not found, the phone number will be send to the outpout without modification.

Examples:

Result	Search for	Replace with
Remove a leading 0 from the phone number	^0(.*)	\1
Replace a leading 80 at the beginning of the phone number by a 0	^80(.*)	0\1
Remove a private pin number that may be identified by a 50 followed by a 3 digit pin.	^50[0-9][0-9][0-9](.*)	\1
Suppress all internal numbers having a 3-digit extension.	^[0-9][0-9][0-9]$	
Add an access code (leading 0) to all numbers with more than 3 digits (e.g. all external numbers).	^([0-9][0-9][0-9].+)	0\1
Add the PBX system root number (03012345) to all internal numbers (with 1 to 3 digits)	^([0-9][0-9]?[0-9]?)$	03012345\1
Adding an area code to all numbers not beginning with 0 and containing at least 4 digits (thus not internal).	^([^0][0-9][0-9][0-9].*)	08151\1

3 Driver Management

Installation
The driver is installed on the system with the Windows® Installer (msi) package. If the set-up package contains several drivers, you can select which drivers should be installed during the set-up.

Register at Tapi System
During the installation, an instance from the selected driver is already registered at the Tapi system. Thereby, you select the necessary data in a Wizard in order to connect the driver with the telephone system.

Configuration of Driver instance
The configuration of the driver instances takes place either over *Telephone and Modem option* in the Control Panel or over the standard program *Advanced Telephone Driver option* that can be found in the Control Panel or in the Start Menu.

Updates
To install an Update start the Windows® Installer Package (msi).
If a driver instance is configured, it is deleted during the Update and is automatically added again after the Update is completed.

Deinstallation
The Deinstallation takes place via the Windows® Software Administration. In the Deinstallation, all instances of the driver are removed from the Tapi system and the software uninstalled.

3.1 Bluetooth Verbindung

4   Software requirements

The estos ECSTA for Bluetooth can be installed on all Windows® systems that support Microsoft® TAPI 2.0 or higher. The Windows® Bluetooth Stack must be available. The following systems are supported in 32- as well as in 64-bit versions.

- Windows® 7
- Windows® 8
- Windows® 8.1

5   Supported TAPI operations

The driver offers the following TAPI call control operations.

Action:	Corresponding TAPI function:
Dial	TSPI_lineMakecall
Hang up	TSPI_lineDrop
Answer call	TSPI_lineAnswer
Hold call	TSPI_lineHold
Retrieve call	TSPI_lineUnhold
Redirect call	TSPI_lineRedirect
Blind transfer	TSPI_lineBlindTransfer
Setup transfer	TSPI_lineSetupTransfer
Swap hold	TSPI_lineSwapHold
Complete transfer	TSPI_lineCompleteTransfer (LINETRANSFERMODE_TRANSFER)
Create conference	TSPI_lineCompleteTransfer (LINETRANSFERMODE_CONFERENCE)
Add to conference	TSPI_lineAddToConference
Remove from conference	TSPI_lineRemoveFromConference
Dial in dial tone mode	TSPI_lineDial
Forwarding	TSPI_lineForward TSPI_lineGetAddressStatus • LINEFORWARDMODE_UNCOND
Do not disturb	TSPI_lineForward TSPI_lineGetAddressStatus

The following TAPI functions are implemented due to requirements of the TAPI subsystem.

Other exported functions:

TSPI_lineSendUserUserInfo

TSPI_lineClose

TSPI_lineCloseCall

TSPI_lineConditionalMediaDetection

TSPI_lineDevSpecific

TSPI_lineDevSpecificFeature

TSPI_lineGetDevConfig

TSPI_lineSetDevConfig

TSPI_lineGetAddressCaps

TSPI_lineGetAddressStatus

TSPI_lineGetAddressID

TSPI_lineGetCallAddressID

TSPI_lineGetCallInfo

TSPI_lineGetCallStatus

TSPI_lineGetDevCaps

TSPI_lineGetExtensionID

TSPI_lineGetIcon

TSPI_lineGetID

TSPI_lineGetNumAddressIDs

TSPI_lineNegotiateExtVersion

TSPI_lineNegotiateTSPIVersion

TSPI_lineOpen

TSPI_lineSelectExtVersion

TSPI_lineSetDefaultMediaDetection

TSPI_lineSetStatusMessages

TSPI_lineSetAppSpecific

TSPI_lineSetCallData

TSPI_providerCreateLineDevice

TSPI_providerEnumDevices

TSPI_providerFreeDialogInstance

TSPI_providerGenericDialogData

TSPI_providerInit

TSPI_providerShutdown

TSPI_providerUIIdentify

TSPI_lineGetCallIDs

TUISPI_lineConfigDialog

TUISPI_lineConfigDialogEdit

TUISPI_providerConfig

TUISPI_providerInstall

TUISPI_providerRemove

TUISPI_providerGenericDialog

TUISPI_providerGenericDialogData

6 Info about estos ECSTA for Bluetooth

estos ECSTA for Bluetooth is a product of estos GmbH.

Product updates can be found under http://www.estos.de.

Frequently asked questions and answers, as well as support, can be found under https://www.estos.de/service.

Logging
For error analysis it is possible to create log files. These will be stored by default in c:\ecstabluetooth.

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