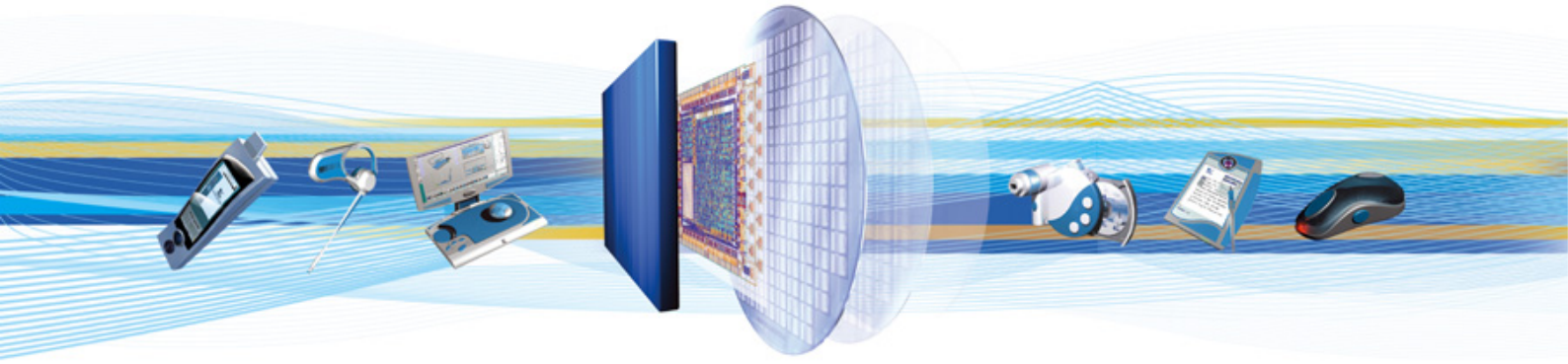
CSR Synergy Bluetooth 18.2.0

PBAPC Phone Book Access Profile Client

Demo Description

November 2011



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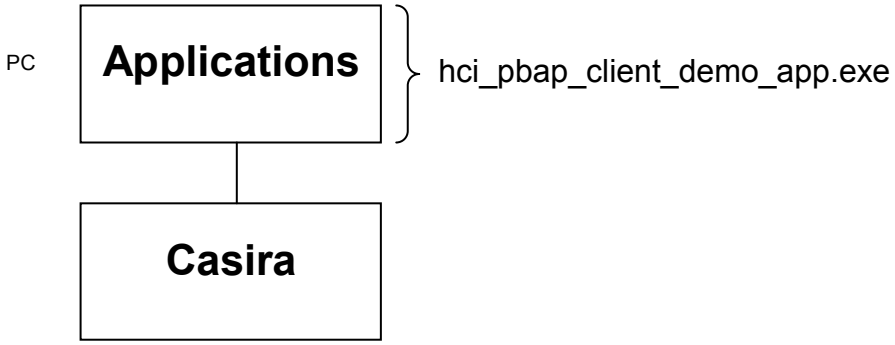
1 OBEX Phone Book Access Profile (PBAP) Client

1.1 Generally

The OBEX PBAP client example application can be used for accessing a phone book. This demo is running with a CASIRA with HCI or RFCOMM-build firmware.



The PBAP client program provides the following example functionality:

- Discovery of remote devices
- Connection management
- Phone book download
- Phone book browsing

The application has been made to run on Windows and Linux and may be connected to the Casira using either a serial connection using BCSP (`rfc_pbap_client_demo_app.exe`), a serial connection using H4DS (`rfc_pbap_client_demo_app_h4ds.exe`) or an USB connection (`rfc_pbap_client_demo_app_usb.exe`), and their HCI equivalent.

1.2 Use of the hci_pbap_client_demo_app.exe program

Note: This description is for CSR Synergy Bluetooth HCI. The functionality of the application for the RFCOMM build is identical.

Program invocation:

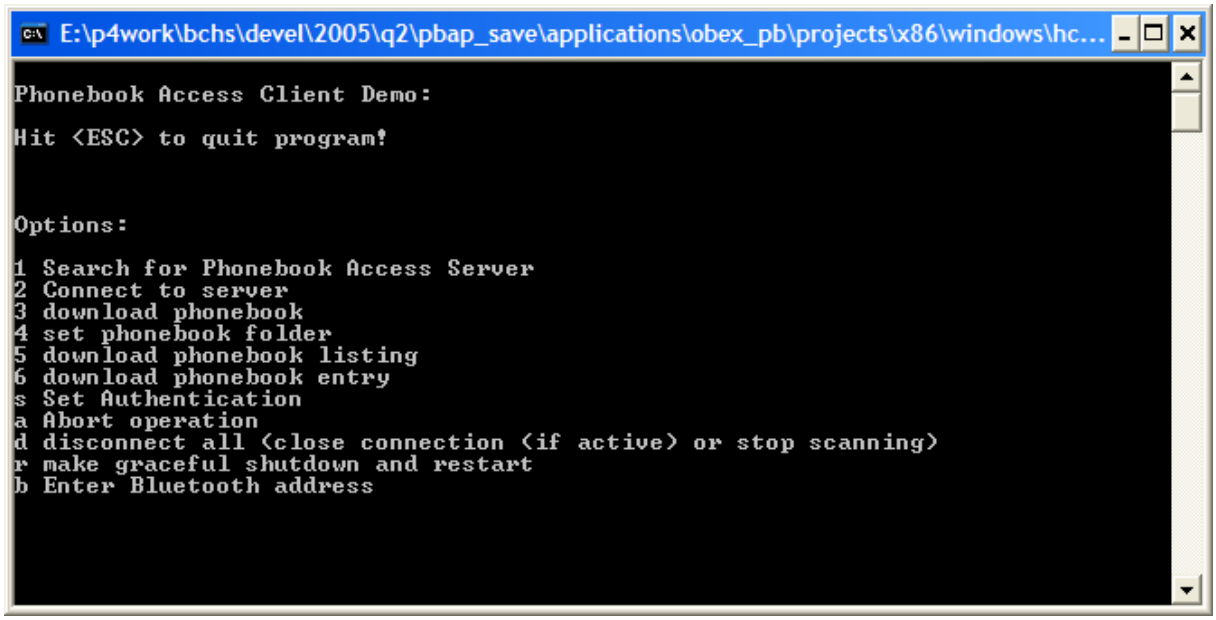
The following program parameters can be given as command line parameters at program start:

-C port	to specify which COM port the program should use (connected to the Casira). For example, -C COM2, default is COM1.
-B baudrate	to specify which baud rate to use between the PC and Casira. For example, -B 921600, default is 115200.
-A BD addr.	to specify a device address for default, e.g. hci_ftp_client_demo_app.exe –a 0002:5b:01a494. If no address is specified it is necessary to perform a search for servers in order to establish a connection.

The local folder used for storing/retrieving files to/from by the demo application is the folder where the program starts.

Program usage:

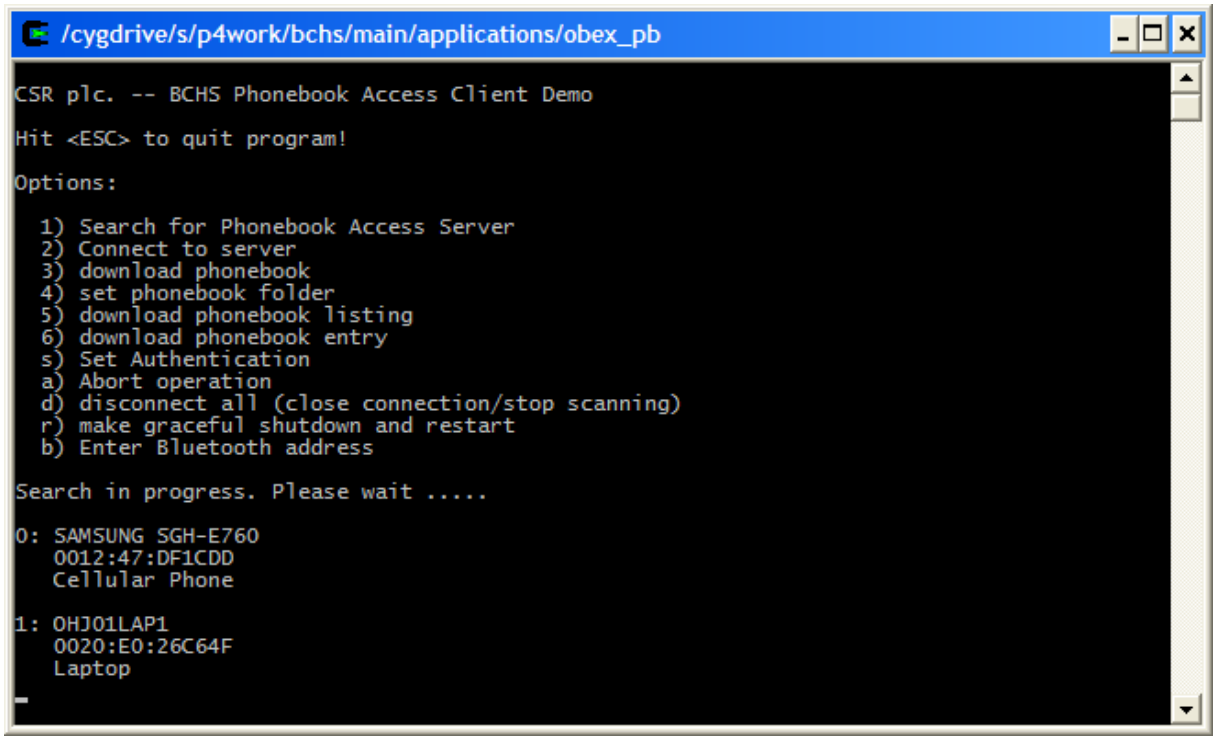
The demo application is implemented as a simple console application:



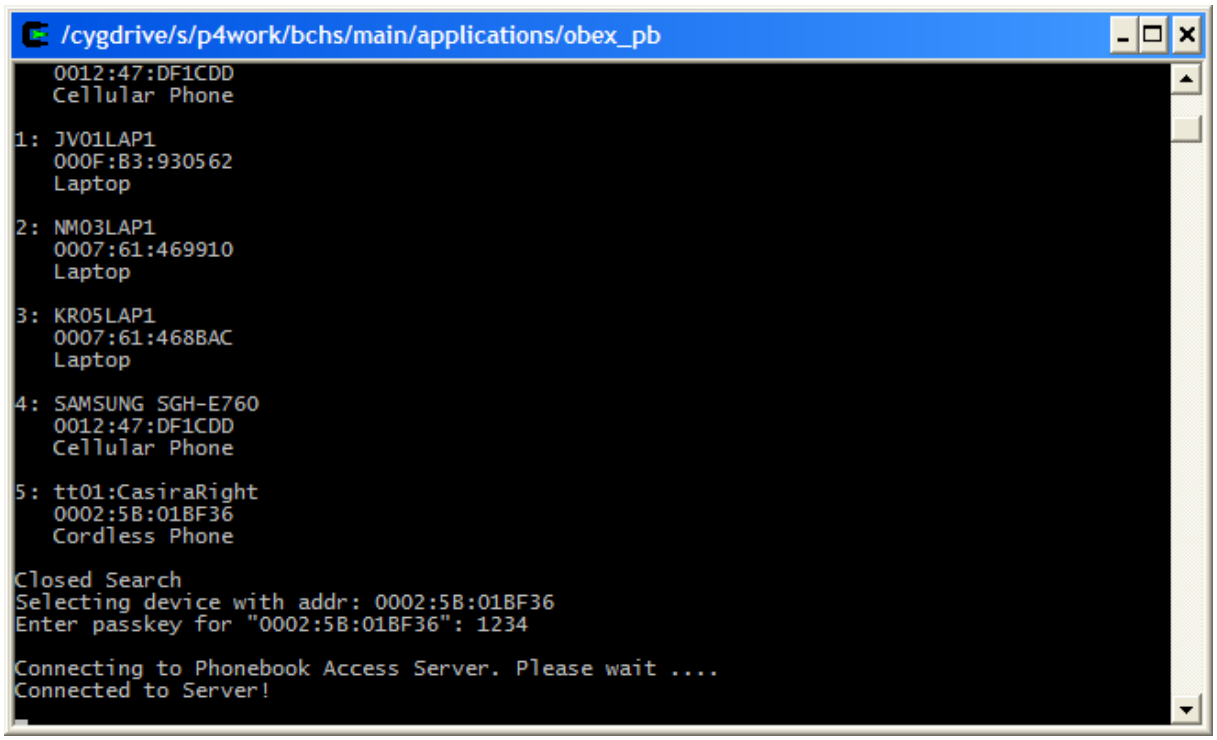
The demo application can be closed (the program aborted) by pressing the ESC key at any time.

The shell commands are explained in detail in the following.

To search for remote devices, issue the "1" command:



The found devices will enumerate on the display when found as shown above. The first field in the enumeration is the remote device name, the second field contains the Bluetooth device address and the third field contains the class of device.



When the desired device appears, click the number appearing to the left of the entry (here 5). The search will close and the device address will be selected. To connect to the device, issue the command “2”. This can be done without a previous search. If a previous search has taken place, the last found address of the search is the default address the "2" command tries to connect to.

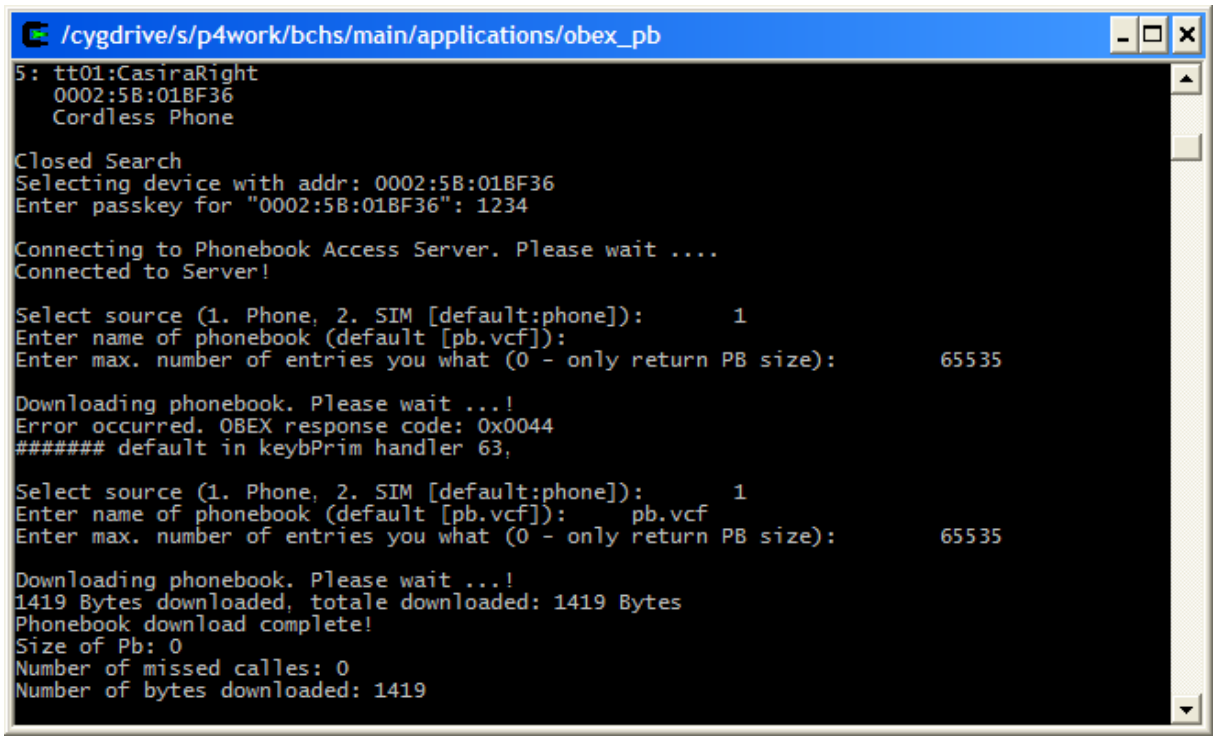
The demo application always uses Bluetooth authentication and encryption. The demo application supports OBEX authentication which can be either:

- Mutual, with the first authentication requested by the server
- Mutual, with the first authentication requested by the client
- One way, with the client identifying the server

You can set the client to request the server to identify itself using the command “s”. The demo application re-uses the Bluetooth passkey for authentication, but the PBAP profile is not limited to use the same Bluetooth passkey for OBEX authentication.

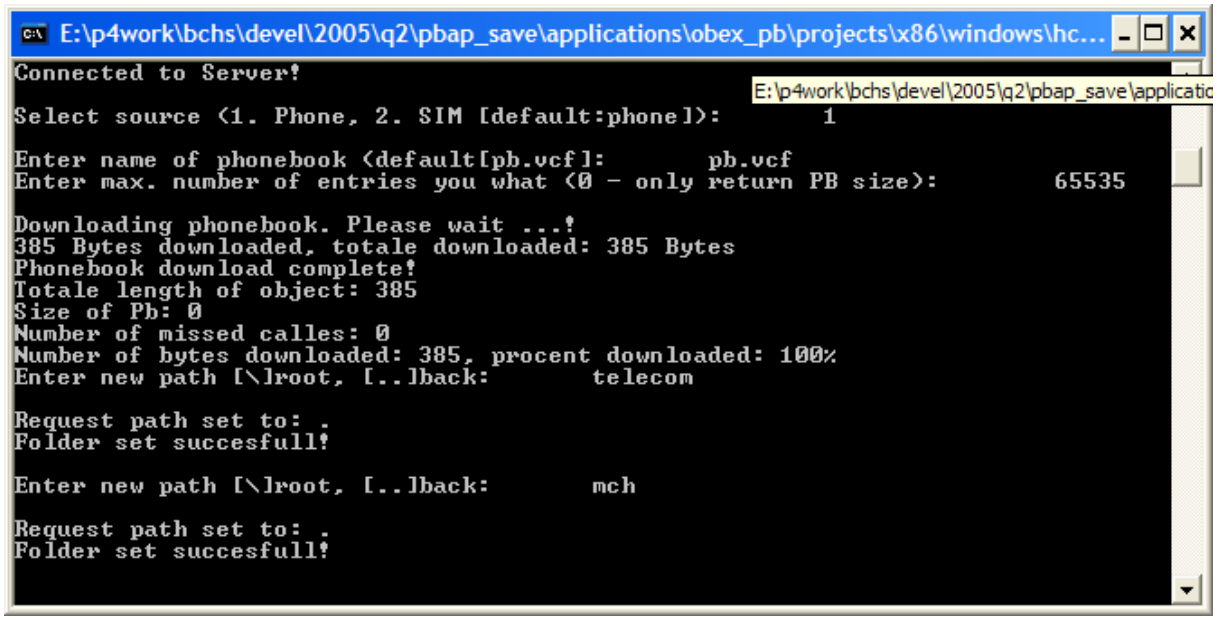
After the client has been authenticated, the connection has been established. The client is now in the root folder.

To download a phone book use command “3”, enter the source (internal memory or SIM), and enter the name of the phone book. PBAP supports the phone books: pb.vcf (main phone book), ich.vcf (incoming calls history), och.vcf (outgoing calls history), mch.vcf (missed calls history) and cch.vcf (combined calls history). The phone book object will store in the demo application’s root folder (the folder in which the application is executed).



You can browse the server using the commands “4”, “5” and “6”.

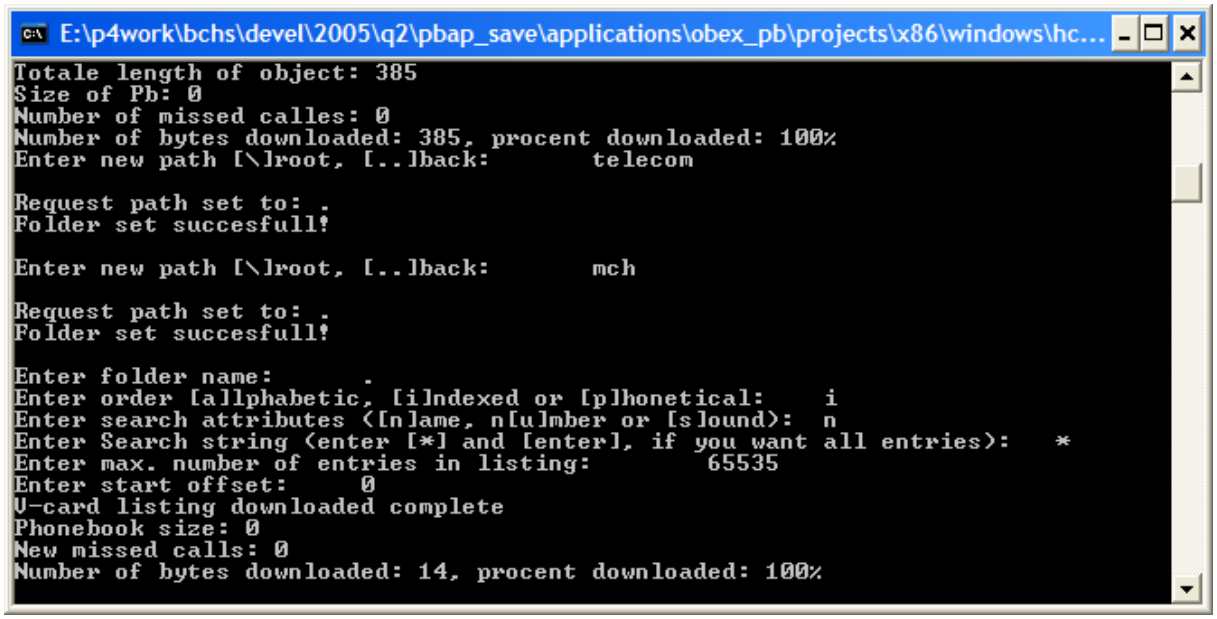
To change the current folder use command “4” and enter the name of the folder. You can only change the current folder one level at a time. If changing the current folder from the root folder to the folder “\SIM1\telecom\pb”, then the set folder command “4” must be called three times. To go back one level in the current folder use the set folder command “4” and enter “..”. The current folder can always be set back to the root folder using command “4” and enter “\”.



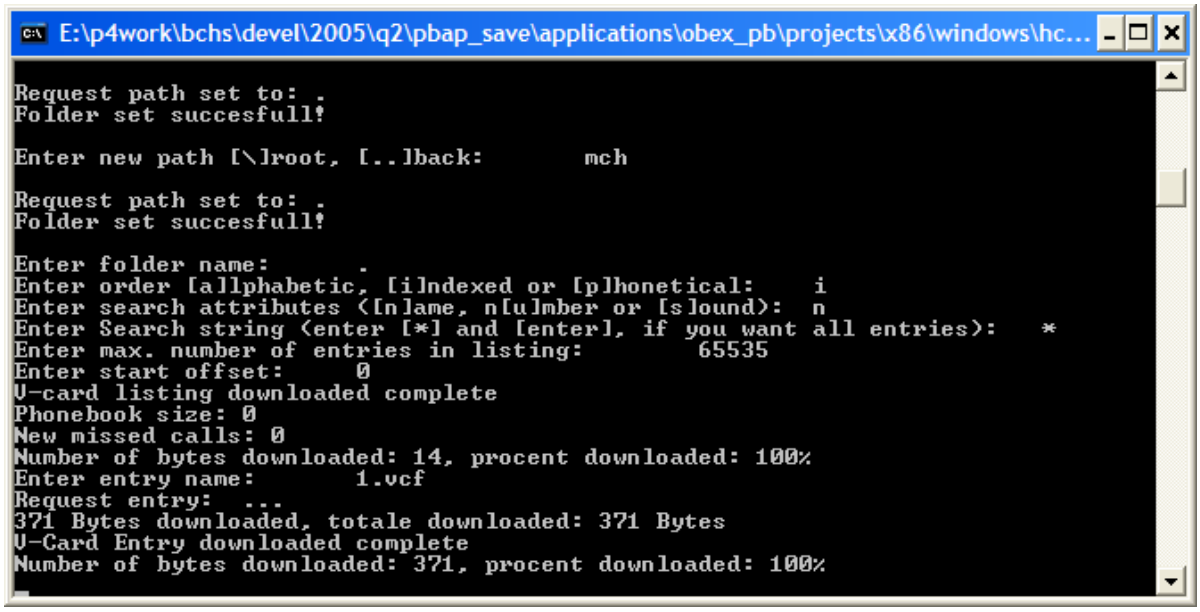
The command “5” will pull a vCard listing of the current folder from the server. When prompting for the folder name, enter name of the folder you are listing of (it must be located in the current folder) or enter “.” to get a folder listing of the current folder. When prompting for “order” enter the desired sorting order for the listing. The “order” can be “a” for alphabetic sorting, “i” for indexed sorting or “p” for phonetically sorting. The default sorting order is indexed, if anything else than a, i or p is entered the sorting order will be set to the default. When prompted for the search attributes you can enter n – for name, u - for number or s – for sound. The default search

attributes is name, if anything else than n, u or s is entered, search attributes will be set to the default. The search string makes it possible to limit the number of entries in the listing and the search will be performed on the attributes entered previously. If you want to get all entries in the listing enter "*". The "maximum number of entries" is the maximum number of entries requested in the list. The offset is the offset to the first entry in the list. Notice that the demo application just saves the vCard-listing object in a file named after the folder. The demo application will add the extension ".vcf" to the file name. If "." is used as folder name the file will be named folder.vcf.

If the demo application is used together with the CSR PBAP demo server, then notice that the server ignores all parameters except folder name.



To get single entry from a phone book use the command "6". Note that it is only possible to get an entry from the current folder. You can use the command "4" to set the current folder.



2 Linux

This section describes how to build and run the PAC demo application on Linux.

The PAC demo application (pure user space), located in `./applications/obex_pb`, may be compiled on Linux by means of:

> make clean all TARGET_ARCH=Linux-2.6-x86

This will output five files: `hci_pb_client_demo_app`, `hci_pb_client_demo_app_h4ds`, and `hci_pb_client_demo_app_usb`, for serial and USB communication using a HCI split and `rfc_pb_client_demo_app`, `rfc_pb_client_demo_app_h4ds`, and `rfc_pb_client_demo_app_usb`, for serial and USB communication using a RFC split.

The demo applications are used like described above for Windows.

Terms and Definitions

BlueCore®	Group term for CSR's range of Bluetooth wireless technology chips
Bluetooth®	Set of technologies providing audio and data transfer over short-range radio connections
CSR	Cambridge Silicon Radio
UniFi™	Group term for CSR's range of chips designed to meet IEEE 802.11 standards

Document History

Revision	Date	History
1	26 SEP 11	Ready for release 18.2.0

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