



CSR Synergy Bluetooth 18.2.0

PBAPS Phone Book Access Profile Server

Demo Description

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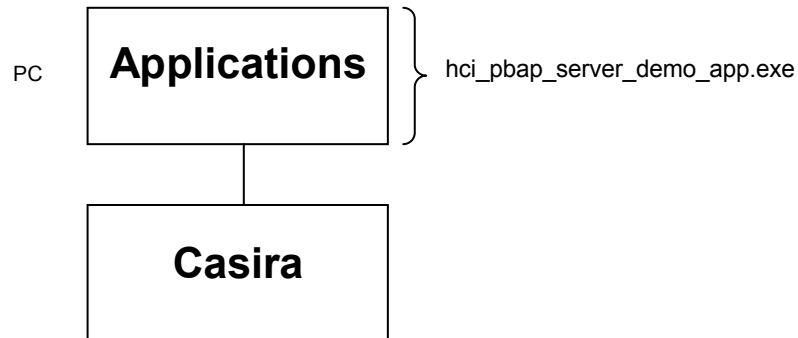
Contents

1	OBEX Phone Book Access Profile Server (PBAP Server)	3
1.1	Generally	3
	Applications	3
	Casira	3
1.2	Phone Book Access Server	4
2	Linux	6
	Terms and Definitions	7
	Document History	7
	TradeMarks, Patents and Licences	8
	Life Support Policy and Use in Safety-critical Compliance	8
	Performance and Conformance	8

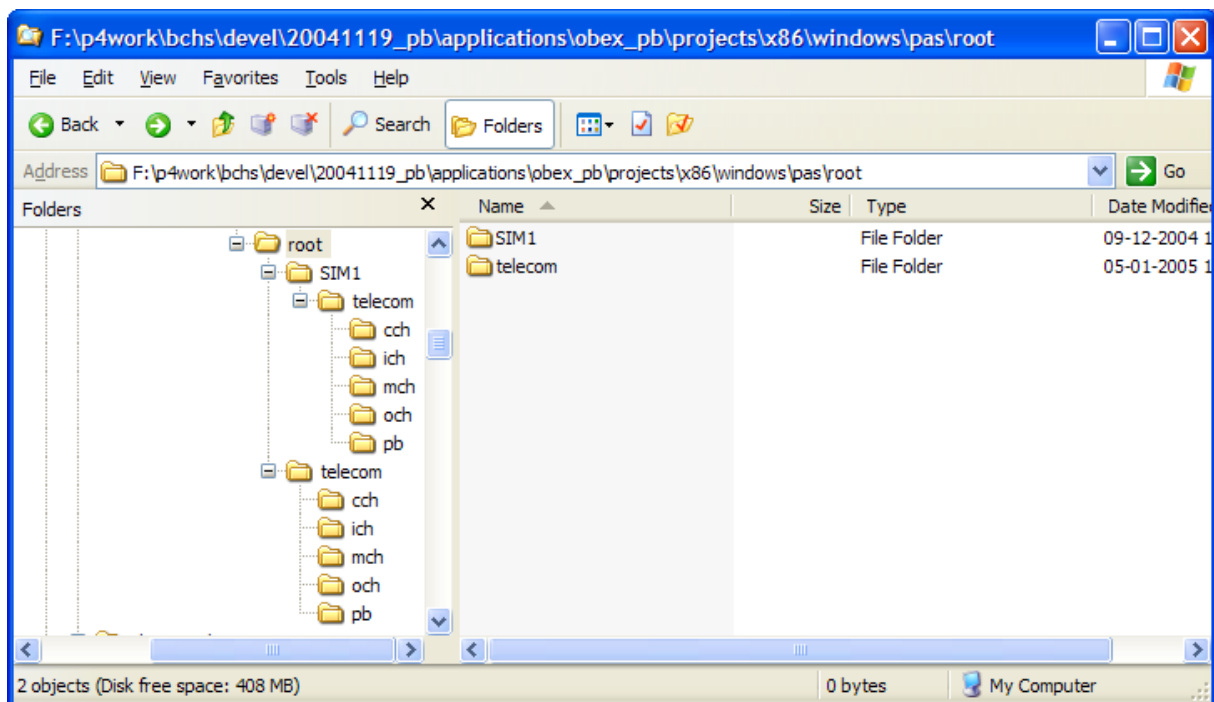
1 OBEX Phone Book Access Profile Server (PBAP Server)

1.1 Generally

The OBEX PBAP server program can be used for accessing a phone book. This demo is running with a CASIRA with RFCOMM or HCI build firmware.



Before starting the program it is necessary to check that a folder named root exists in the same directory where the program is (this is necessary to check if the program is moved to another directory). The root directory is the share root folder for the phone book. All the shared files and folders have to be placed in this directory.



The folder shown in the illustration above is the virtual folder structure the application must support.

In case the directory does not exist, the shared root will be the directory from where the program is started.

1.2 Phone Book Access Server

Use of program hci_pbap_server_demo_app.exe

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

For use of this program, a client side is required.

A server waits for the client to connect and pull objects, i.e. all activity takes place from the client side. However, you can be asked to type in pin-code for both Bluetooth and OBEX authentication.

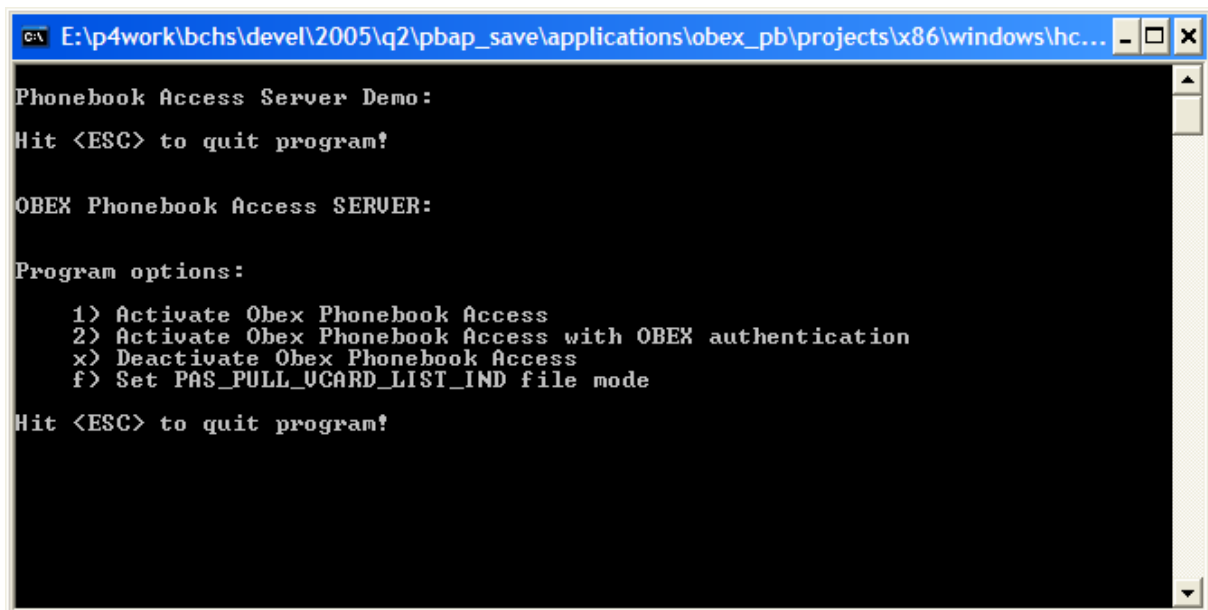
Examples:

- The client can select the server from a list of possible servers, and setting up a connection to it
- The client can pull a phone book from the server to the client
- The client can display the server's virtual folder hierarchy, including the files in the folders, and move through the server's folder hierarchy to select the current folder. The current folder is where items are pulled and/or pushed
- The client can pull a single phone book entry from the current folder
- The client can abort an operation on the server

Start the program hci_pbap_server_demo_app, and the following options are available.

1. Choose the COM port on which the Bluetooth module is connected, by specifying the `-C` parameter to the program, e.g. `hci_pbap_server_demo_app -C COM1`. At start up COM1 is selected as default.
2. Choose baudrate for the COM port on which the Bluetooth module is connected, by specifying the `-B` parameter to the program, e.g. `hci_pbap_server_demo_app -B 115200`. If no parameter is specified the default is 115200.
3. Choose a specific device for default connection by specifying the `-a` parameter to the program, e.g. `hci_pbap_server_demo_app -a 0002:5b:01a494`. If no address is specified it is necessary to perform a search for servers in order to establish a connection. This parameter is optional.

At start up, the following possibilities are available, see below illustration:



```

C:\ E:\p4work\bchs\devel\2005\q2\pbap_save\applications\obex_pb\projects\x86\windows\hc...
Phonebook Access Server Demo:
Hit <ESC> to quit program!

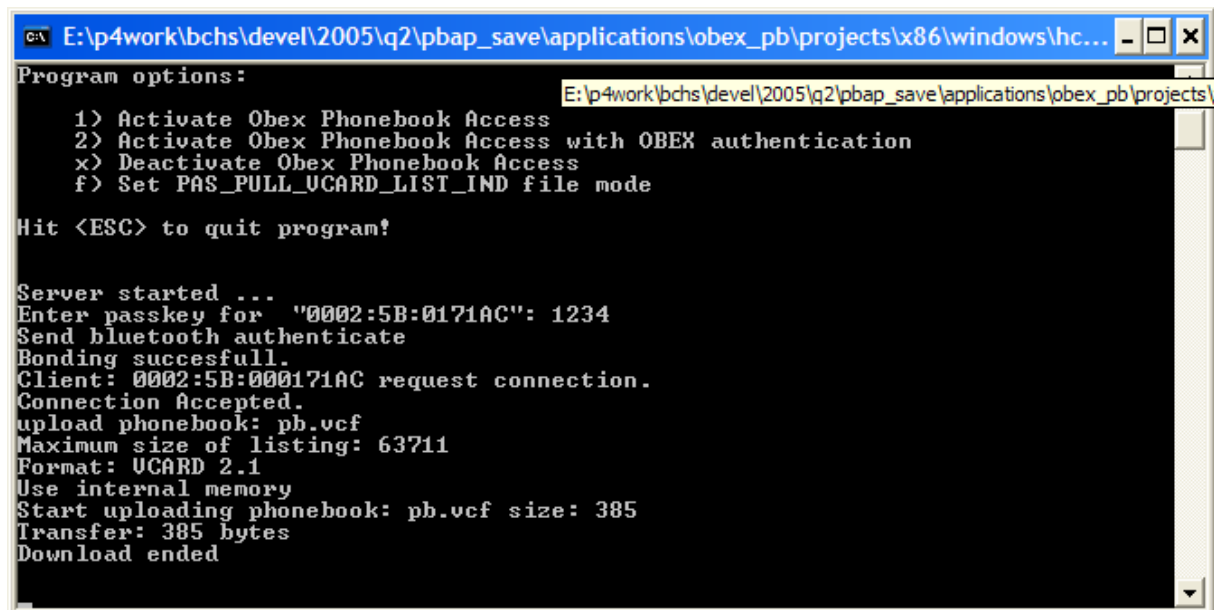
OBEX Phonebook Access SERVER:

Program options:
  1) Activate Obex Phonebook Access
  2) Activate Obex Phonebook Access with OBEX authentication
  x) Deactivate Obex Phonebook Access
  f) Set PAS_PULL_UCARD_LIST_IND file mode
Hit <ESC> to quit program!
  
```

Choosing 1 or 2 will activate the server and it will be discoverable – the server waits for the client to connect and makes the operation. The difference between choosing ‘1’ and ‘2’ is that ‘2’ will initiate OBEX authentication against the client when it tries to connect.

Choosing ‘x’ will deactivate the server and it will not be discoverable or connectable. ESC is chosen for closing the program.

Choosing f) sets the server in file mode. In this mode the server will always respond to a CSR_BT_PAS_PULL_VCARD_LIST_IND by returning the file /root/folder.vcf. This mode can be used for testing against a PCE with the correct vCard format. The server will respond to a CSR_BT_PAS_PULL_VCARD_LIST_IND by returning the current folder structure as ASCII text if it is not in file mode.



```

C:\ E:\p4work\bchs\devel\2005\q2\pbap_save\applications\obex_pb\projects\x86\windows\hc...
Program options:
1) Activate Obex Phonebook Access
2) Activate Obex Phonebook Access with OBEX authentication
x) Deactivate Obex Phonebook Access
f) Set PAS_PULL_UCARD_LIST_IND file mode

Hit <ESC> to quit program!

Server started ...
Enter passkey for "0002:5B:0171AC": 1234
Send bluetooth authenticate
Bonding succesfull.
Client: 0002:5B:000171AC request connection.
Connection Accepted.
upload phonebook: pb.vcf
Maximum size of listing: 63711
Format: UCARD 2.1
Use internal memory
Start uploading phonebook: pb.vcf size: 385
Transfer: 385 bytes
Download ended
  
```

The illustration above shows an example where the client pulls a phone book called “pb.vcf” from the server.

Note, the application only supports vCard format UTF-8 with no Byte Order Mark. If a vCard with another format is presented to the application it will be transferred as if it is a UTF-8 vCard. This can cause failure on a Phonebook client.

The PBAP client can also initiate OBEX authentication against the server, the user will then be asked to enter the OBEX response passkey. The demo application uses the same passkey for Bluetooth and OBEX. The OBEX passkey does, however not need to be identical with the Bluetooth passkey.

2 Linux

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

The PAS 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 four files: `hci_pb_server_demo_app`, `hci_pb-server_demo_app_h4ds` and `hci_pb_server_demo_app_usb`, for serial and USB communication using a HCI split and `rfc_pb_server_demo_app`, `rfc_pb_server_demo_app_h4ds`, and `rfc_pb_server_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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