Quick User guide

for

Pairing of BS and PU using SimpleHost application

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1 Introduction

This document describes how to operate the SimpleHost application for pairing BS (FP) and PU (PP) which is necessary for normal operation between BS and PU.

Section 2 is a very short quick guide for how to use SimpleHost application for the Pairing.
Section 3 is a more detailed guide.

1.1 Terms and abbreviations

Abbreviation	Description
BS	Base station
COM	Communication port (serial port)
EAI	Embedded Access Interface
EVK	Evaluation Kit
OTA	Over The Air
PU	Portable unit
REPS	RTX EAI Port Server
RX	Receiver
UART	Universal Asynchronous Receive and Transmit
Term	**Description**
Paco	Platform name covering the TeamEngage™ portfolio variants: Singlecell and Multicell

2 Short Quick Guide for Pairing

Pairing is only possible if the BS (FP) and PU (PP) are using same DECT region and if a RF radio link between the units is possible. The pairing (registration) will be over the radio link interface i.e. Over The Air interface (OTA).

The SimpleHost application (*SimpleHost.exe*) is a windows executable console application interfacing directly to the RTX1090EVK through the COM port on the PC. The application takes the COM port number as parameter:

SimpleHost.exe [COM port number]

So in Case the BS EVK is connected on COM port 5 and the PU EVK is connected on COM port 4

```
SimpleHost.exe 5  -> will Start SimpleHost Console for the BS
SimpleHost.exe 4  -> will Start SimpleHost Console for the PU
```

On both the BS and PU SimpleHost Console press `'s'` key on the PC keyboard for start

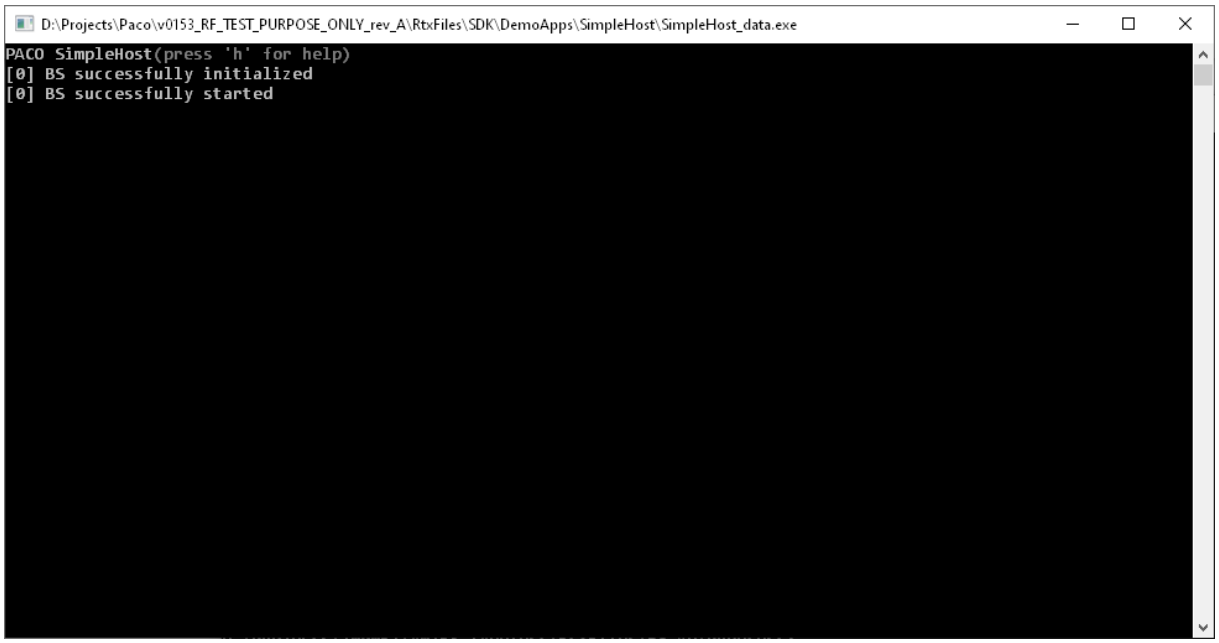

Figure 1 Simple Host BS start option

The PU unit (PP) will write “PU successfully initialized”. In case the BS and PU never was paired before the PU will also write “PU link unsuccessfully started”.

Press `'o'` key on the PC keyboard for OTA registration i.e. pairing to start on the Simple Host console of both the BS and PU.

Wait some seconds. If there is a radio link between the units, the registration should be successfully and the console looks like:

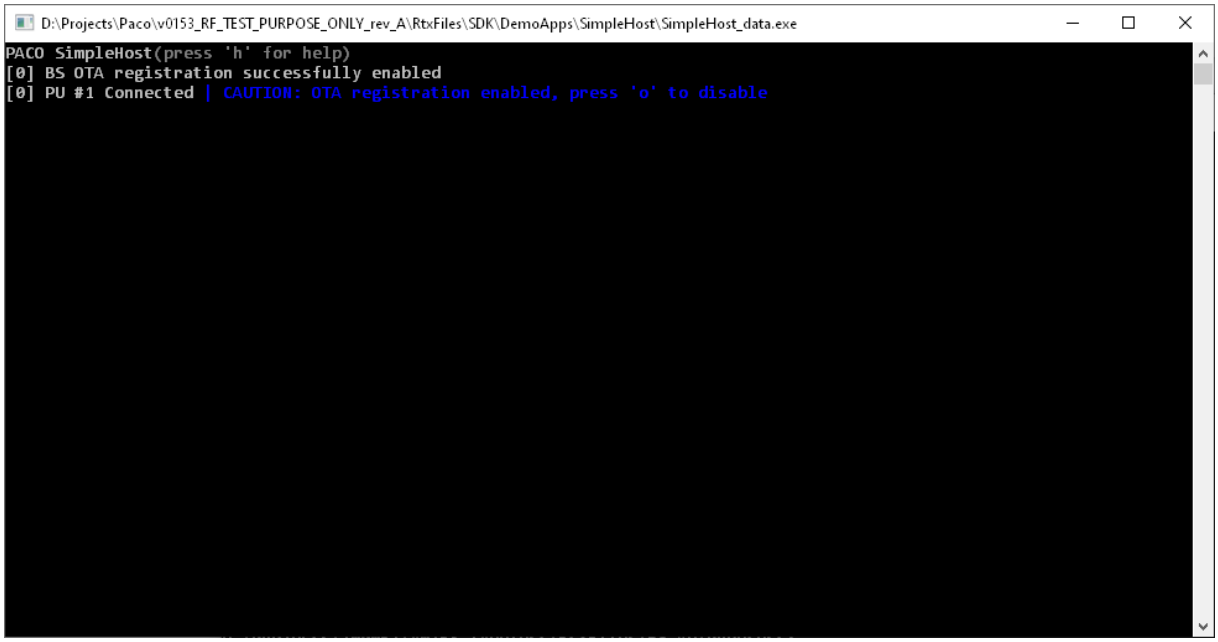

Figure 2 BS Simple Host Console after a successful registration.

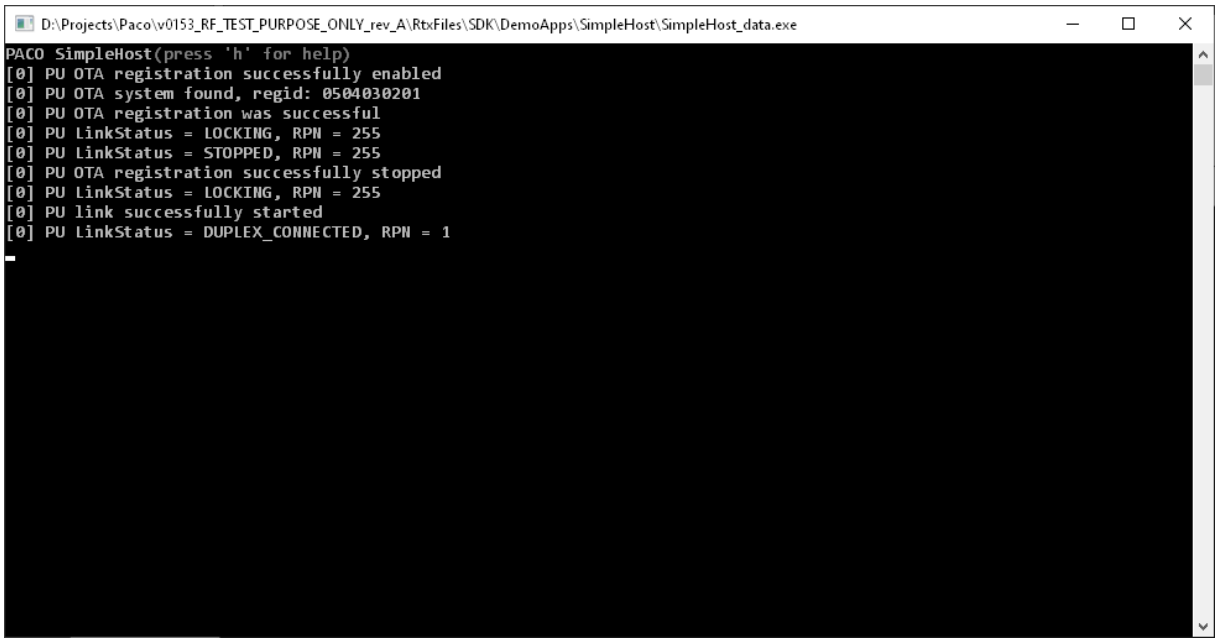

Figure 3 PU Simple Host Console after a successful registration.

3 More detailed info of SimpleHost application

The SimpleHost application (*SimpleHost.exe*) is a windows executable console application interfacing directly to the RTX1090EVK through the COM port on the PC. The application takes the COM port number as parameter:

SimpleHost.exe [COM port number], e.g., `SimpleHost.exe 5`

Before starting the SimpleHost application, make sure to close any RTX EAI Port Servers (REPS) running on the same COM port, otherwise the connection between the application and device will fail.

> NB: Tip for improved performance but not required!
>
> Prior to following this guide, it is important to understand that if the SimpleHost application is used to set up a link between a base station and one (or more) portable unit(s), then the application must be copied to independent folders, e.g., as shown below.
>
> *Root\SimpleHost_BS\SimpleHost.exe*
> *Root\SimpleHost_PU1\SimpleHost.exe*
> *Root\SimpleHost_PU2\SimpleHost.exe*

The above setup will ensure, that the user is able to run the SimpleHost application isolated for each device, which will also have its own COM port on the PC. Please note that the COM port used for the base station in this quick guide is 5 i.e. using COM port 5, and the COM port used for the portable unit is 4 i.e. COM port 4.

After startup of the SimpleHost application, it will start API communication to the attached device through the UART on the selected COM port, hence requesting it to reset.

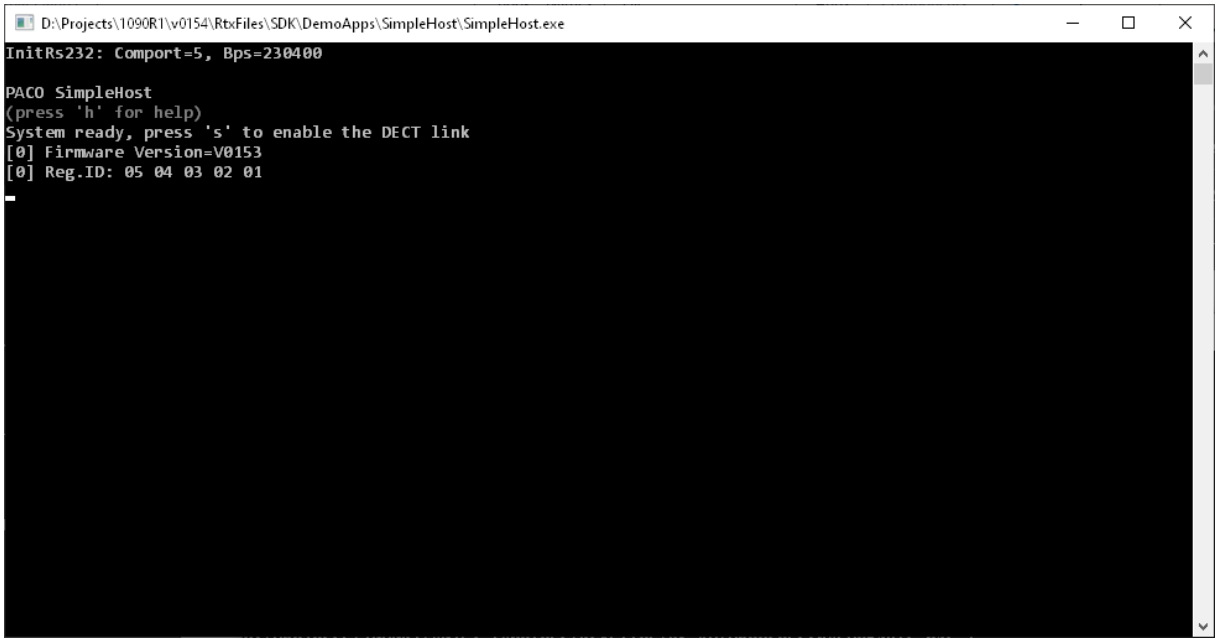

Figure 4 Simple Host start on the FP (BS) on COM port 5.

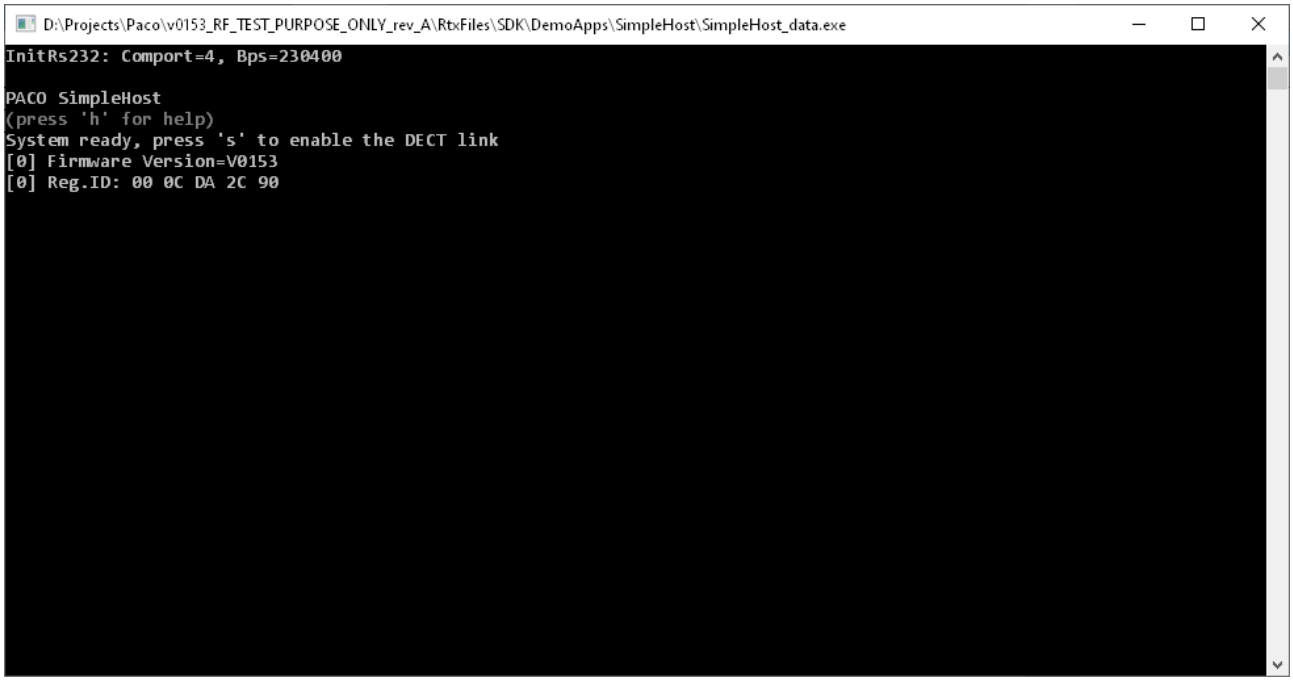

Figure 5 Simple Host start on the PP (PU) COM Port 4.

3.1 Help menu

Once the initial information is read from the device successfully, use the 'h' key on the PC keyboard to access the help menu of the SimpleHost application, as shown in Figure 6 below. The help menu is different for base station and portable unit.

> Before starting the DECT module from the SimpleHost application, please set the DECT region ('toggle DECT countries') to the correct region i.e., the region where the evaluation is to be performed.
> **ATTENTION:** Incorrect DECT region setting can cause penalties, as this violates local spectrum regulations.

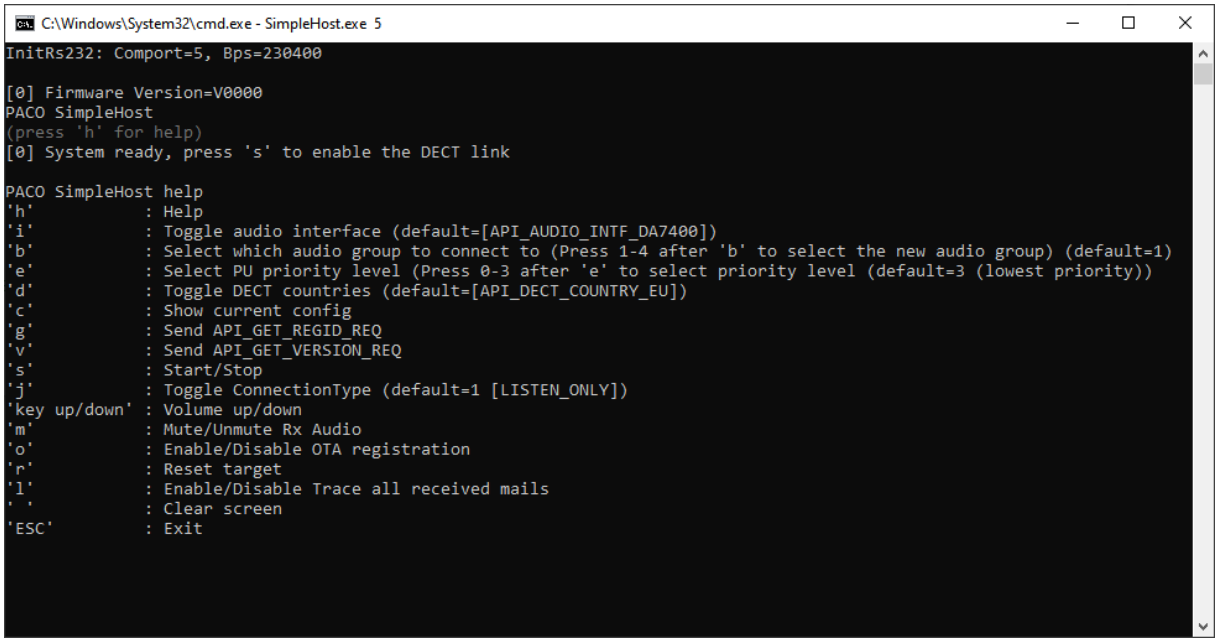

Figure 6: SimpleHost help menu

3.2 Initializing and starting the base station

Once the preferred configuration for the base station has been set up select the 's' key on the PC keyboard, to execute the initializing and startup sequence. This sequence is identical to the initializing and startup sequence shown in Figure 7 below.

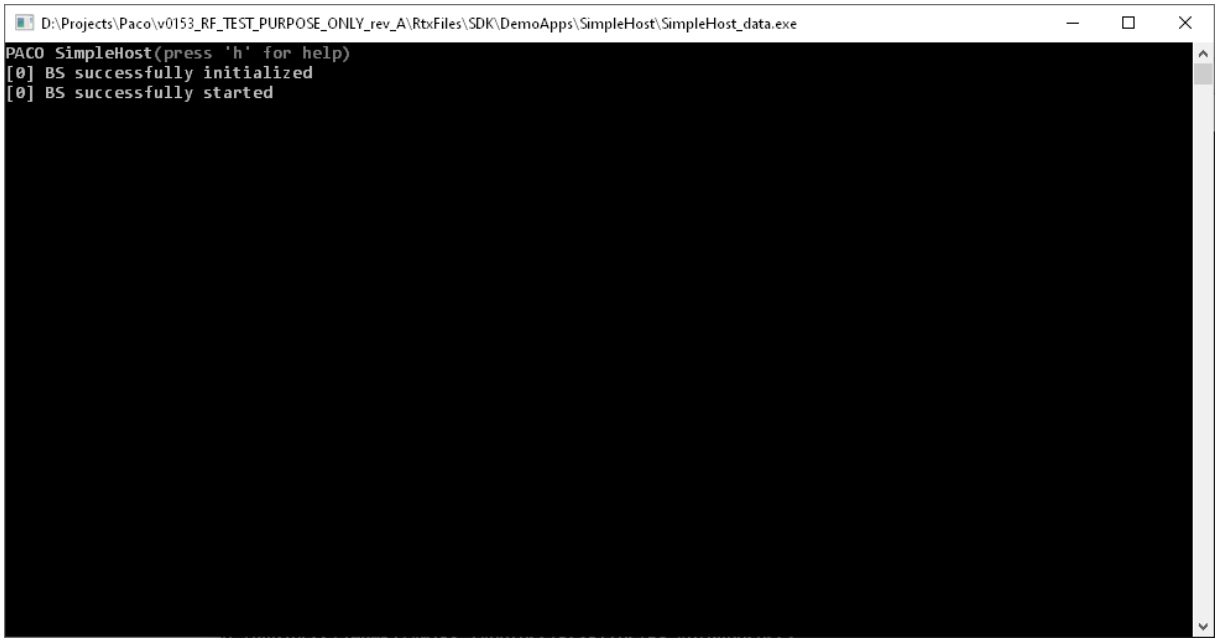

Figure 7: Initializing and startup sequence of BS device

Configurating of the BS shouldn't be necessary but is short explained in the Appendix.

3.3 Initializing and starting the portable unit

Once the preferred configuration for the portable unit has been setup, as described in subsection 4.2, select the 's' key on the PC keyboard, to execute the initializing and startup sequence. This sequence is identical to the initializing and startup sequence shown in Figure 8 below.

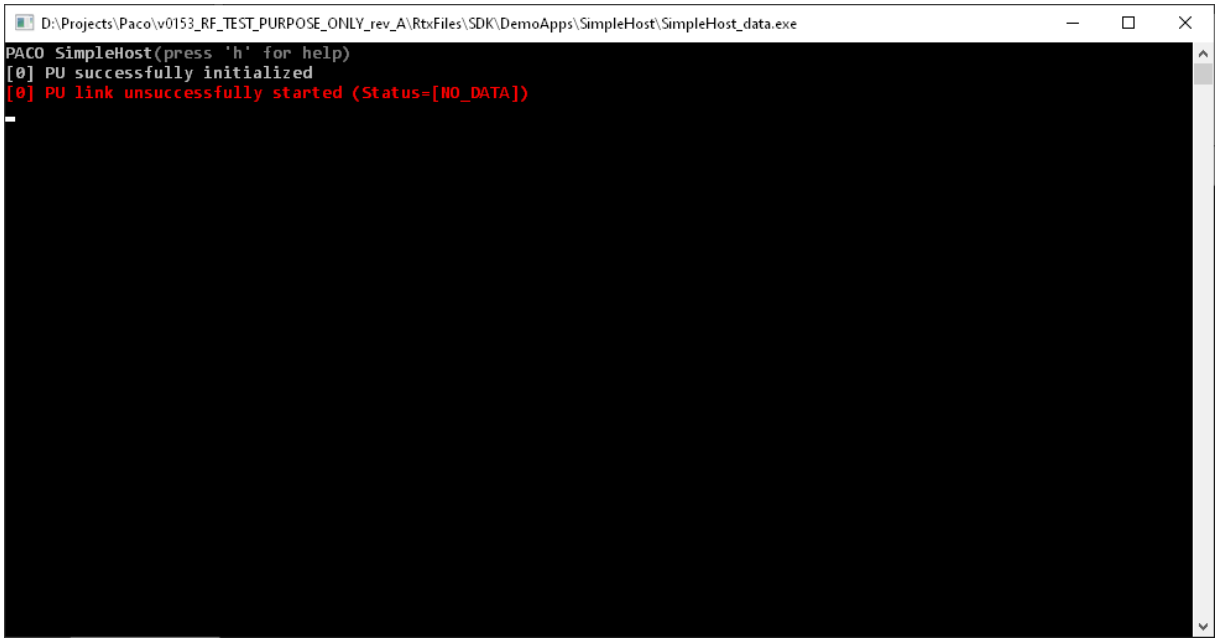

Figure 8: Initializing and startup sequence of PU device

Configurating of the PU shouldn't be necessary but is short explained in the Appendix.

3.4 Over The Air registration

The SimpleHost application supports OTA registration. This can be enabled or disabled by pressing the 'o' key on the PC keyboard and allows both the base station and portable units to wirelessly register with each other, as shown in Figure 9 below.

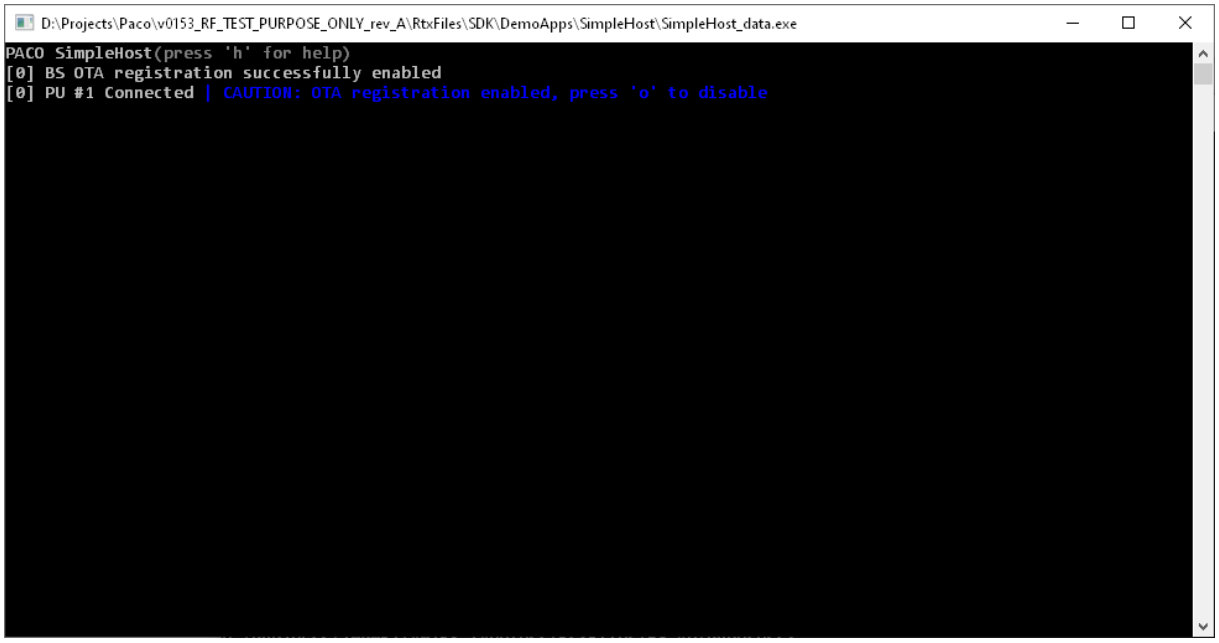

Figure 9: BS OTA registration enabled, and PU #1 successfully registered

(Please note the base station *must* be successfully initialized and started (by pressing the 's' key on the PC keyboard) before the OTA registration can be enabled.)

Figure 10 below shows the start and enablement of the OTA registration for the portable unit, and the subsequently successful registration with the base station, as shown in Figure 9.

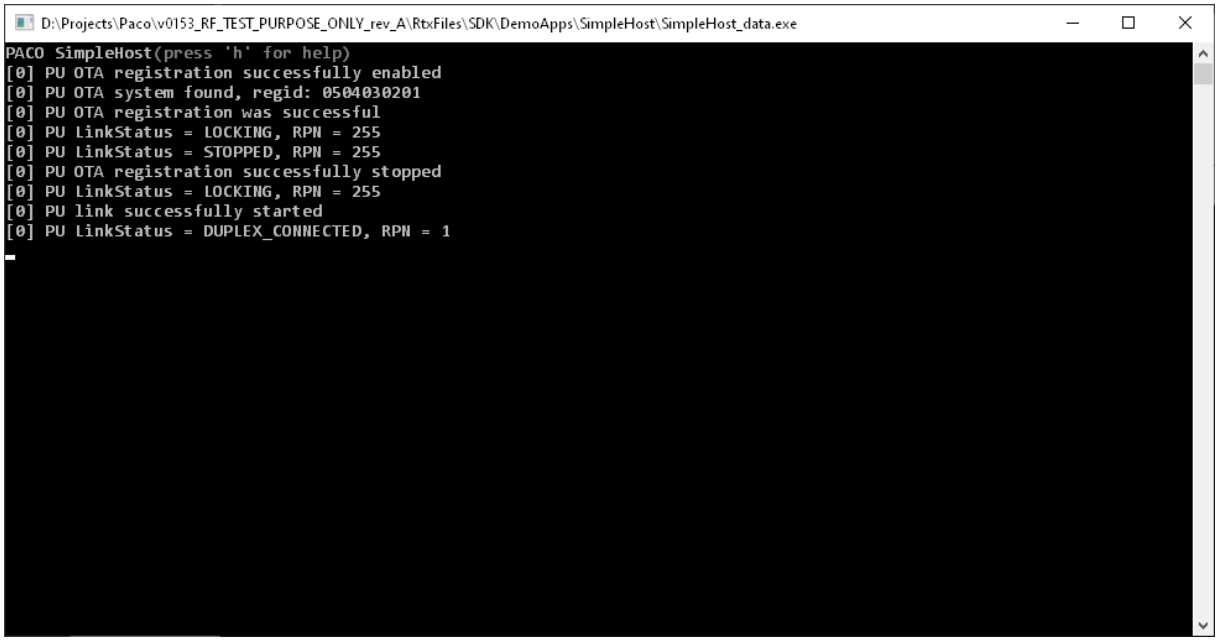

Figure 10: PU OTA registration enabled and successful registration to BS

3.5 Data transmission

In case the the SimpleHost_data.exe has been used data transmission can be used by pressing the 't' key on the PC keyboard

In case of BS transmission of 6 data packets.

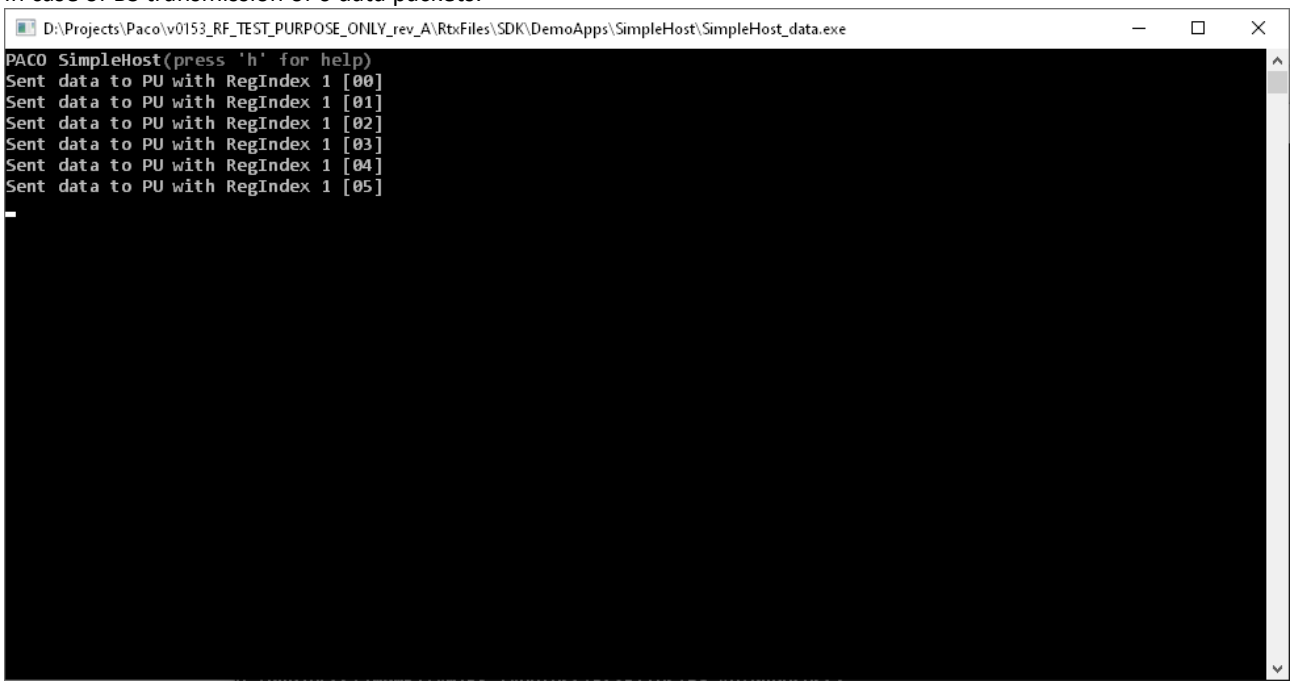

Figure 11 BS SimpleHost after pressing t for data tranmission 6 times.

The PU SimpleHost console should register the data transmission like below:

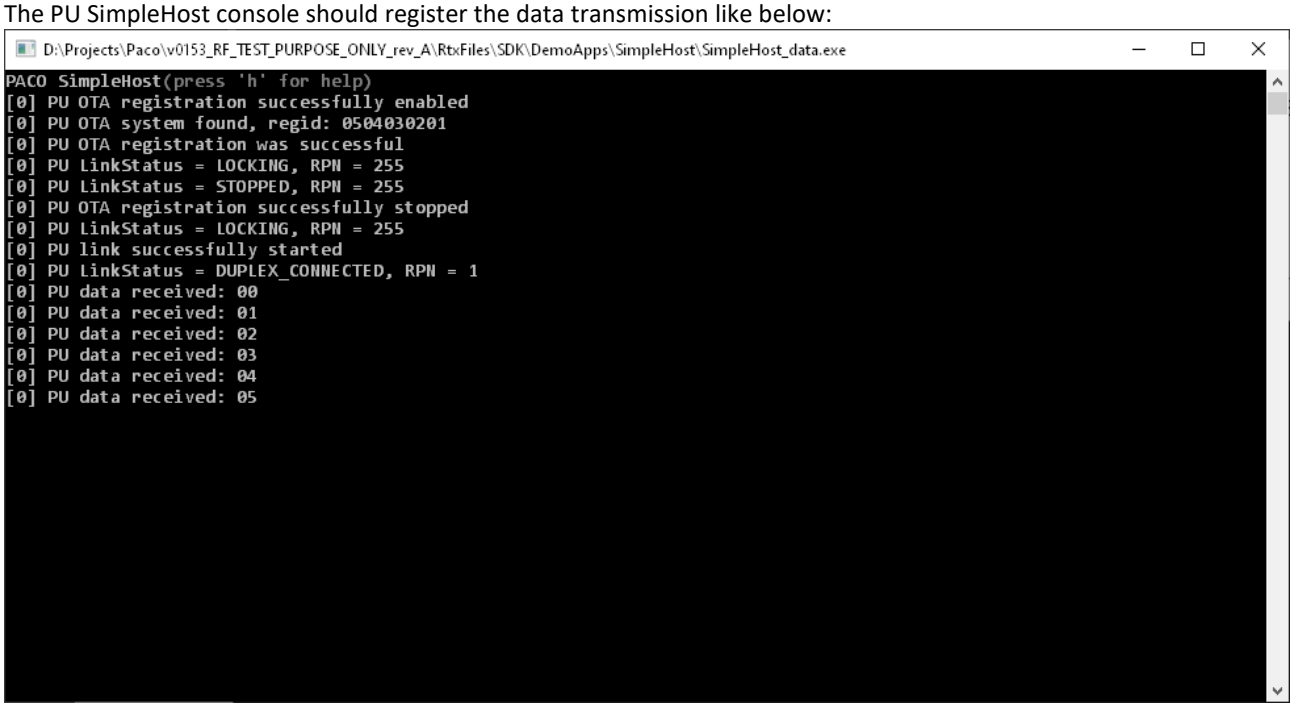

Figure 12 PU SimpleHost console registration of 6 FP data transmission.

The PU can also send data by pressing the 't' key on the PC keyboard. Below is example of 9 PU data transmission.

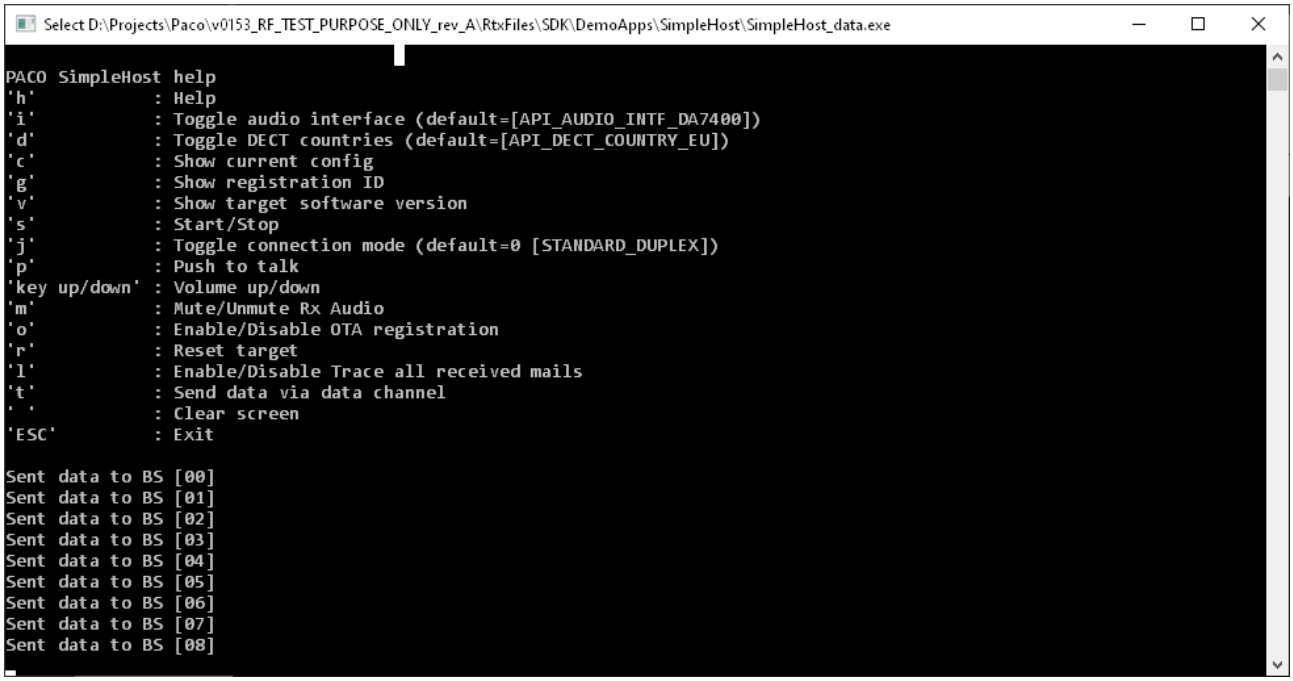

Figure 13 PU SimpleHost console data transmission 8 times.

On the BS SimpleHost Console this is received:

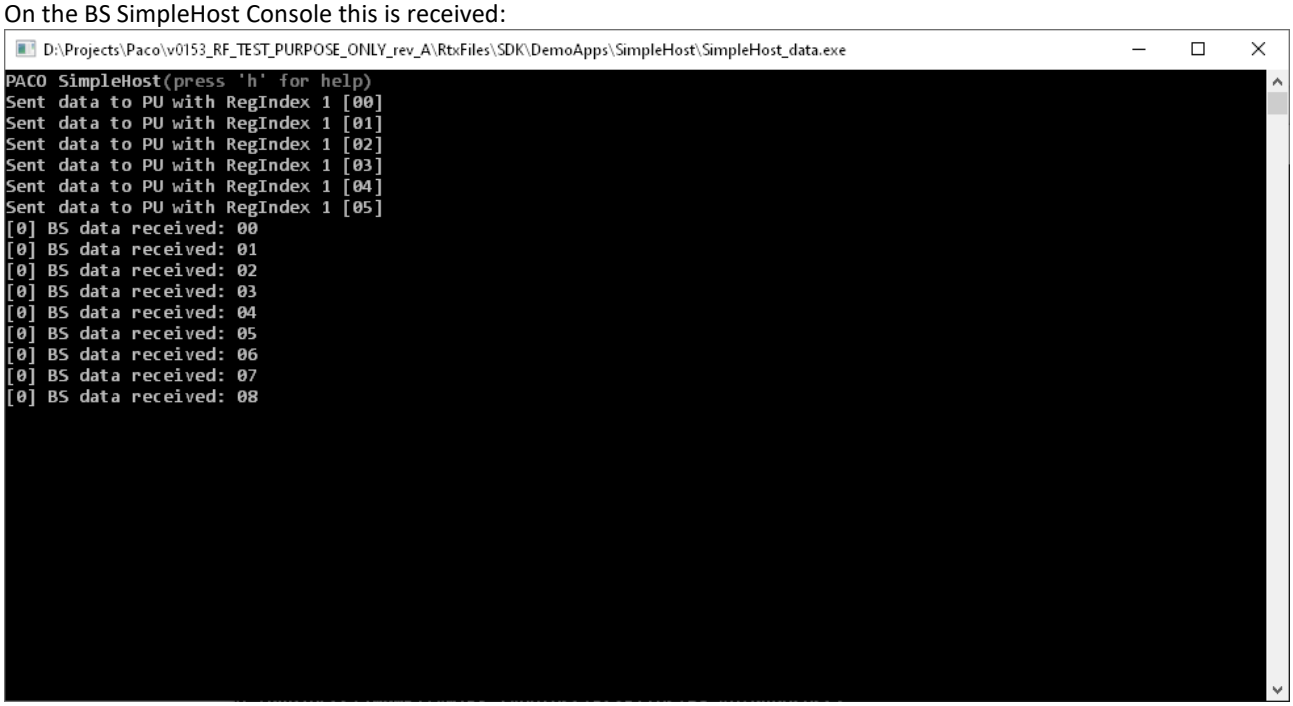

Figure 14 BS SimpleHost console receiving data.

3.6 Clear screen

To clear the screen, press the `Space` key on the PC keyboard.

3.7 Exit

To close the UART connection and exit the SimpleHost application, select the `ESC` key on the PC keyboard.

4 Appendix

4.1 Editing startup configuration of BS device

Use the 'c' key on the PC keyboard to show the current startup configuration of the base station, as shown in Figure 15 below.

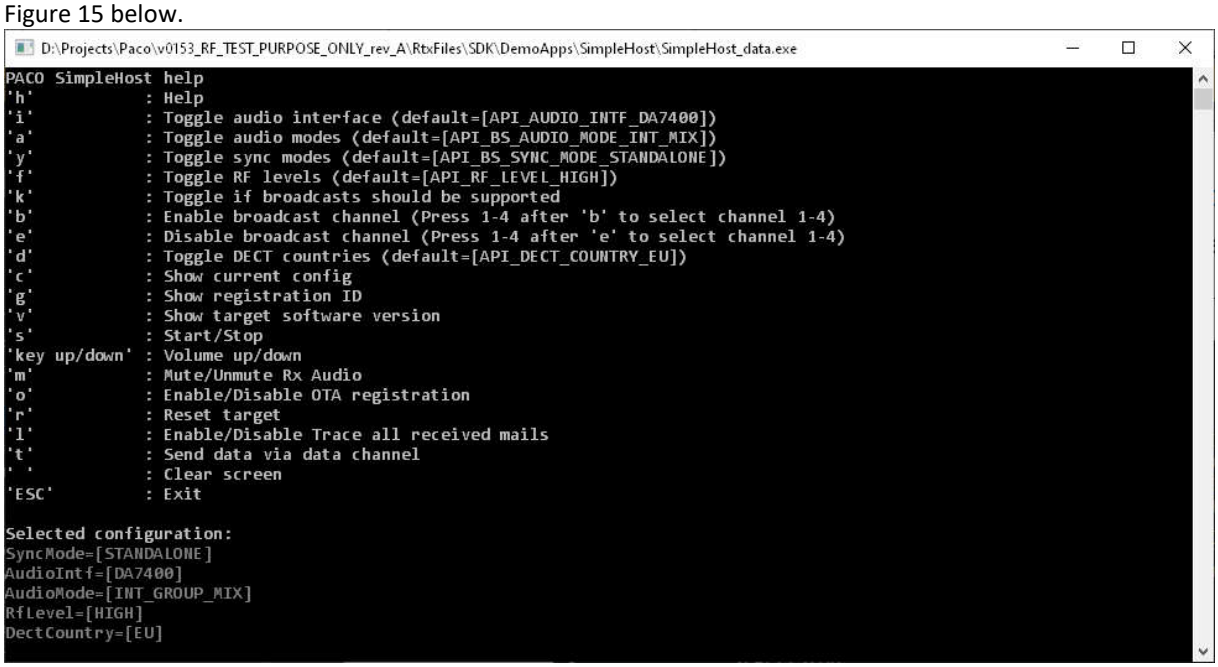

Figure 15: SimpleHost current BS startup configuration

The SimpleHost application and the base station support configuration of *AudioIntf, SyncMode*, *AudioMode*, *RF level*, and *DECT country*. By selecting the 'i', 'a', 'y', 'f' and 'd' keys on the PC keyboard, each selection can be toggled. However, should not be needed to change!!

Press "c" to view the current configuration.

4.2 Editing startup configuration of the portable unit

Use the 'c' key on the PC keyboard to show the current startup configuration of the portable unit, as shown in Figure 16 below.

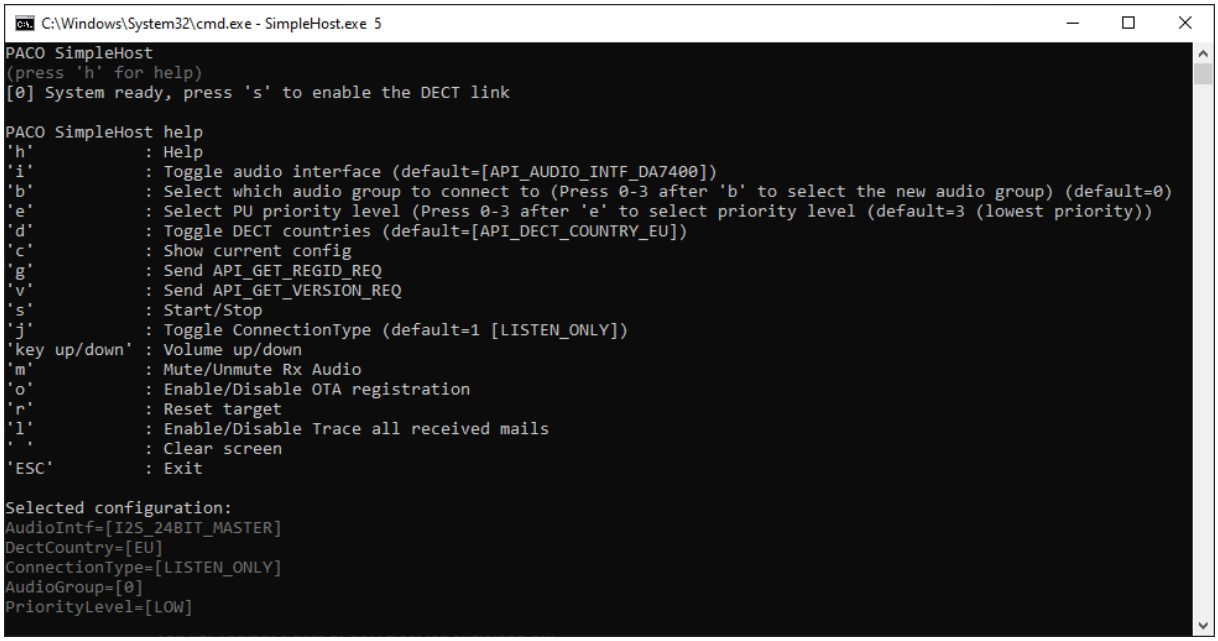

Figure 16: SimpleHost current PU startup configuration

The SimpleHost application and portable unit support the configuration of *AudioIntf* and *DECT country*. By selecting the 'i', and 'd' keys on the PC keyboard, each selection can be toggled

Verify that the startup configuration is as expected, by selecting the 'c' key on the PC keyboard, as shown in Figure 16 above.