HiPath Cordless IP Diagnostics requirements

1. Call related problems

The following info is required for call and handset related problems:

1. The detailed, actual problem description including the following info:

   1.1. Who has called whom including:
      1.1.1. Phone numbers
      1.1.2. Display Names
      1.1.3. Terminal-types
      1.1.4. Software version of the terminals
      1.1.5. Info about external or internal call (Dect/Dect   Dect/internal   Dect/external)

   1.2. Description about the call progress (who has initiated the call, a call back, etc.)

   1.3. If a call was disconnected unexpected the:
      1.3.1. Info about the display content of the DECT handset in the problem case like:
         1.3.1.1.   can be seen immediately after a disconnection of the call directly the idle display
         1.3.1.2.   can be seen immediately after a disconnection of the call a flashing display
         1.3.1.3.   can be seen immediately after a disconnection of the call a text
                    like "has hang-up"
      1.3.2. Info if the Hang-up tone can be heard after an unexpected disconnection

   1.4. If the connection has a bad quality, please describe the dysfunction
        like clicking noise, voice dropouts, echo, voice delay, low noise [you can hear your partner, but with
        noise in background] or strong noise [you can hear only a loud noise and not your partner])

   1.5. Point of time when the problem occurred.

   1.6. Is the problem reproducible?

   1.7. If possible a photo from the display content or a video from the total problem sequence.

   1.8. Info about the position of the DECT user at the site plan

   1.9. Info if the DECT user has moved during the call

   1.10.   For internal users info about configured call distribution features like Teams,
              MULAP, Call Pickup, etc.

2. The statistical distribution of the problem:

   2.1. How often does the problem on a day?
   2.2. What is the relationship between good and bad DECT calls?
   2.3. Is there a relationship between DECT problems and a dedicated location, e.g. a staircase?
   2.4. Is there a relationship between DECT problems and a determinate base station?

3. The current site plan (position plan) of the base stations including information about special
   environmental conditions, e.g. reinforced concrete ceiling, wire-reinforced glass wall,
   closeness of strong electric consumers, closeness of other radio technology like WLAN, other DECT
   systems or medical equipment like X-Ray, CT, etc..

Please check it, that the distance of the base stations is larger than 50 cm to any metal surfaces. Please document this with a photo.

4. A current network deployment plan including the following info as **picture**:

    4.1. IP addresses of all related components
    4.2. Info about VPN
    4.3. Info about the used PBX´s including used software versions and interconnections if more as one PBX is used (e.g. OSV/OSB or two linked OSBiz)
    4.4. Info about BSIP deployment (small, medium, large) and used software version
    4.5. Info about problem related SIP phones
    4.6. Info about used switches
    4.7. Info, if a UC solution (e.g. Web Client, MyPortal, etc. is involved)

5. Please log in at the BSIP web based management as "UnifyAdmin" and provide the following data:
    5.1. BSIP backup (Administration > Backup Config)
    5.2. the BSIP log data (Debugging > Download Logfiles)
    5.3. BSIP coredump (Debugging > Download Corefiles)
    5.4. And screenshots of

5.4.1. WBM Status > Base Status	(absolute)
5.4.2. WBM Status > Base Mibs	(absolute, previous)
5.4.3. WBM Status > Base RSSI (-85 dB) of all base stations	(absolute)
5.4.4. WBM Status > Base 1588	(absolute)
5.4.5. WBM Status > User Mibs	(absolute, previous)

6. The radio coverage at the location where the problem occurs (FRAQ and RSSI values concerning chapter 7-1 of the BSIP Service Documentation).

7. A Wireshark trace recorded at a mirror port of the IWU of the BSIP is required.
If the problem is reproducible please deliver only a short Wireshark trace, which covers the problem.

If the failure is not reproducible and a long time recording is needed, please record multiple files with a size of 100MB.

You can write Wireshark compatible files with the following command line tools:

For Linux as example

```
tcpdump -i eth0 -s 1500 -C 100 -W 50 -w hcip.pcap
```

where –C 100 stands for the file size in MB, –W 50 for 50 files and eth0 specifies the interface.

For Windows and Linux is tshark available as part of the Wireshark installation:

```
tshark -i 3 -b filesize:102400 -b files:50 -s 65535 -w c:\tmp\hcip.pcap
```
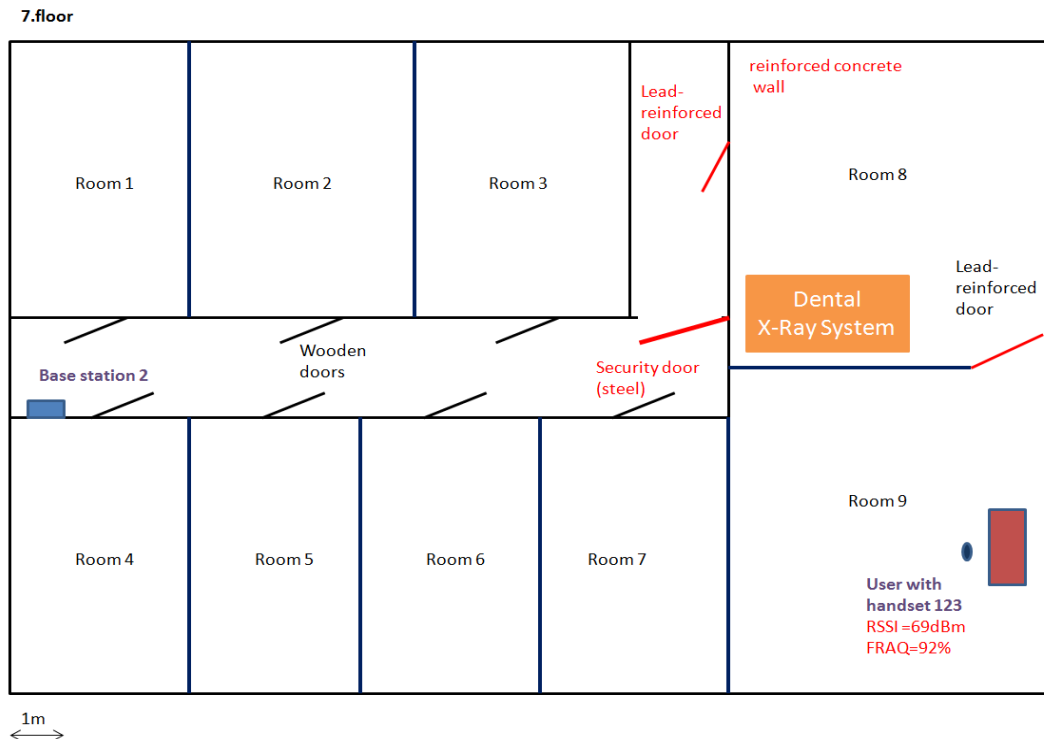
where –i 3 specifies the interface. With `tshark -D` can you get an overview about the available interfaces. The file size is specified in KB.

8. In dependency of the used PBX please attach also the internal diagnosis data from the PBX related on the timing at which the error occurred

9. PSR files if PSR required (E.g. the use of non supported switches).
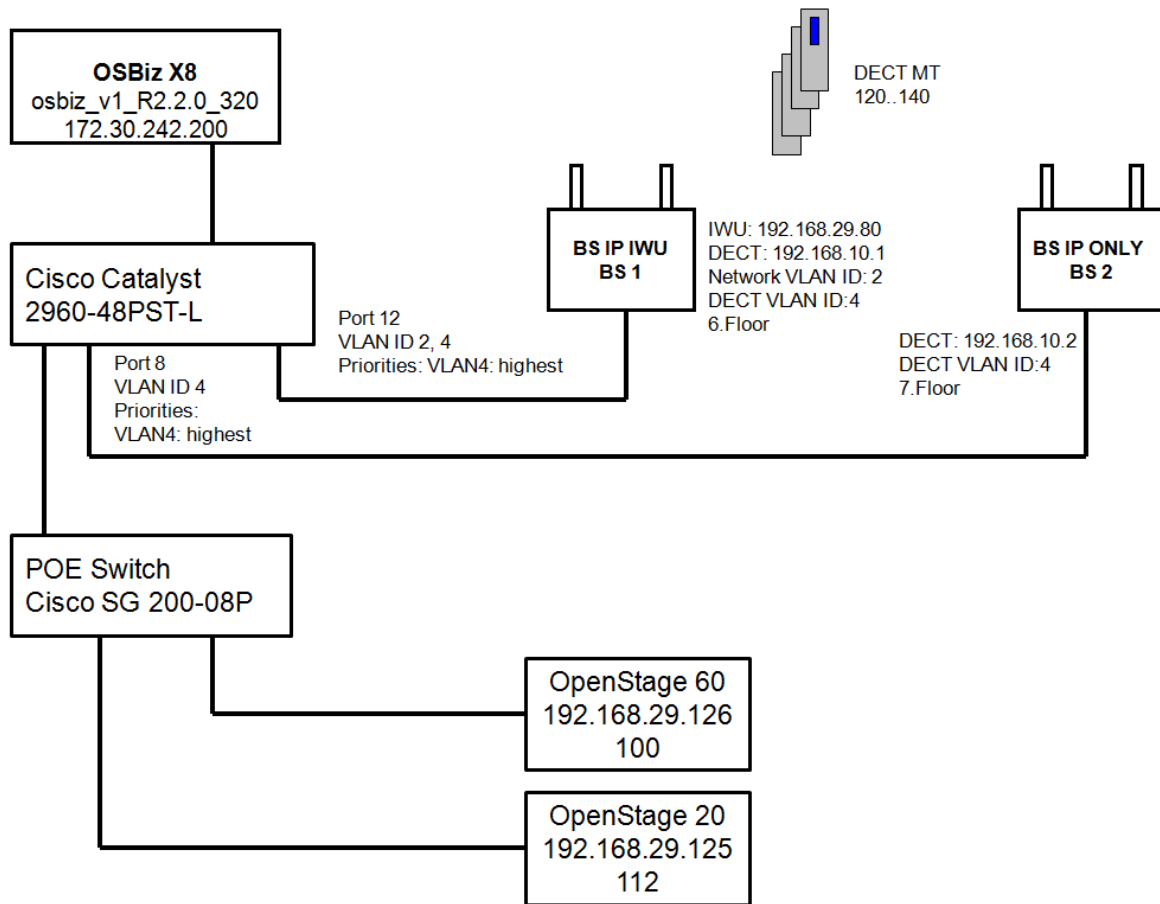
1.1 Example for Call related problems

- *the DECT user "Meyer with the internal phone number 123 with an SL4 with SW Version V1 R2.1.0 has called the external partner "Lehmann" with the number 00987654321*

- *user 123 calls 00987654321*
  user 123 got a ringing tone
  user 00987654321 accepts the call and is successfully connected with 123
  the user talks five minutes without problems
  after five minutes hears the user 123 a strong noise and user 00987654321 was disconnected

- *the problem occurs at 2014-07-23 at 17:50*
- *the problem is not reproducible*
- *the user with the handset 123 sits during telephone call in room number 9*
- *the user 123 is in a MULAP with the OpenStage Phone 100*

- *The problem occurs two times per day.*
- *There is an average of 500 Dect calls per day.*
- *The problem occurs mostly at the seventh floor.*
- *The problem occurs mostly at the proximity of base station two.*

Floorplan:

7.floor

Room 1
Room 2
Room 3

reinforced concrete wall
Lead-reinforced door
Room 8

Dental X-Ray System
Lead-reinforced door

Base station 2
Wooden doors
Security door (steel)

Room 4
Room 5
Room 6
Room 7

Room 9

User with handset 123
RSSI =69dBm
FRAQ=92%

1m

Networkplan:

```
┌─────────────────────┐                                        ▐ DECT MT
│      OSBiz X8        │                                          120..140
│  osbiz_v1_R2.2.0_320 │
│   172.30.242.200     │
└──────────┬──────────┘                      ┌──────────────┐              ┌──────────────┐
           │                                 │  BS IP IWU   │   IWU: 192.168.29.80   │ BS IP ONLY │
           │                                 │    BS 1      │   DECT: 192.168.10.1   │   BS 2     │
┌──────────┴──────────┐                      └──────────────┘   Network VLAN ID: 2   └────────────┘
│   Cisco Catalyst     │                                        DECT VLAN ID:4
│   2960-48PST-L       │                                        6.Floor
│                      │         Port 12
└──┬───────────────────┘         VLAN ID 2, 4                                    DECT: 192.168.10.2
   │         Port 8              Priorities: VLAN4: highest                       DECT VLAN ID:4
   │         VLAN ID 4                                                            7.Floor
   │         Priorities:
   │         VLAN4: highest
```

OSBiz X8
osbiz_v1_R2.2.0_320
172.30.242.200

Cisco Catalyst
2960-48PST-L

Port 8
VLAN ID 4
Priorities:
VLAN4: highest

Port 12
VLAN ID 2, 4
Priorities: VLAN4: highest

BS IP IWU
BS 1

IWU: 192.168.29.80
DECT: 192.168.10.1
Network VLAN ID: 2
DECT VLAN ID:4
6.Floor

DECT MT
120..140

BS IP ONLY
BS 2

DECT: 192.168.10.2
DECT VLAN ID:4
7.Floor

POE Switch
Cisco SG 200-08P

OpenStage 60
192.168.29.126
100

OpenStage 20
192.168.29.125
112

Attachments: iwu_config.tgz
             logfiles.tgz
             coredump.tgz
             screenshots.zip
             wireshark_2014_07_23__17_00.pcap
             photo_location_bs2.jpg
             172.30.242.200-gw-2014-07-23-diagfiles.tgz
             PSR_Example_Customer.pdf

!END of example!

2. Problems concerning WBM

The following info is required for all problems with the use of the WBM:

1. The detailed, actual problem description including the following info:

    1.1. Please describe step by step, which operation of usage of the WBM causes a problem.
    1.2. Please document this as screenshots or as video sequence.
    1.3. Please describe which behavior you expect.
    1.4. Please note the point of time when the problem occurred.
    1.5. Is the problem reproducible?

2. If it is problem relevant, please attach the network deployment plan like described in chapter 7.5.1.

3. Please log in at the BSIP web based management as "UnifyAdmin" and provide the following data:
    3.1. BSIP backup (Administration > Backup Config)
    3.2. the BSIP log data (Debugging > Download Logfiles)
    3.3. BSIP coredump (Debugging > Download Corefiles)
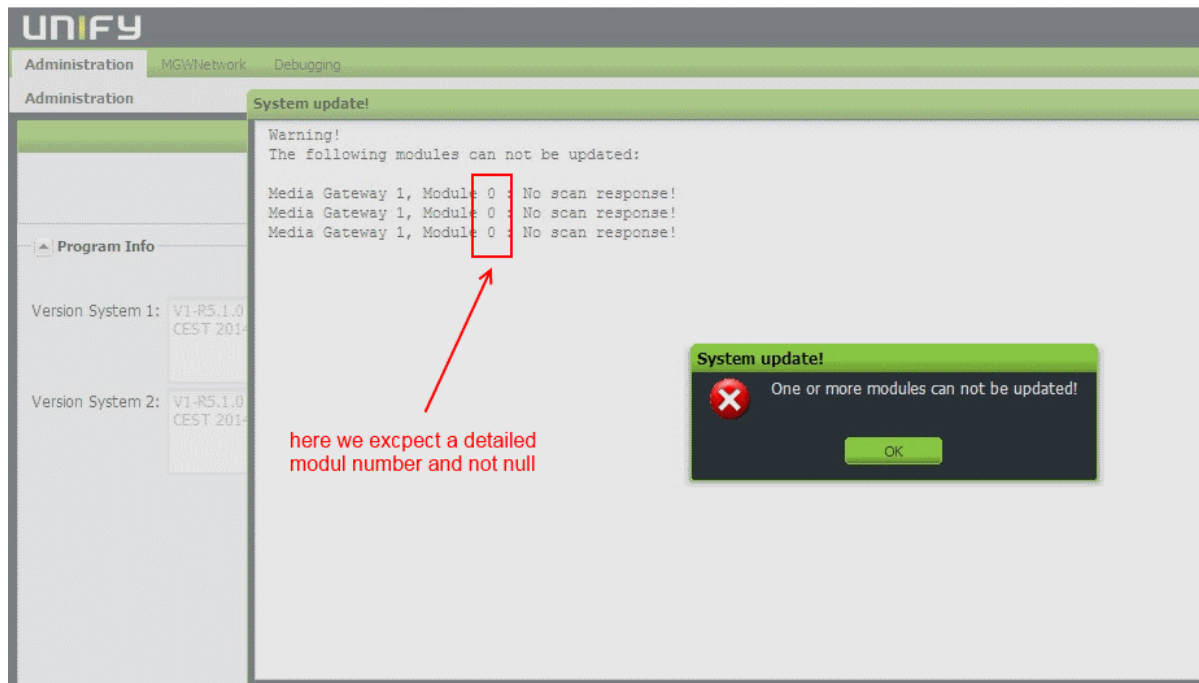
2.1 Example for problems concerning WBM

!this is only an example!
I try to update the firmware via the WBM > Administration > System Update.
The update of some base stations fails because of network problems.
I got an error message, but the Modul number is ever zero.
I expect a dedicated number.

Attachments: iwu_config.tgz
logfiles.tgz
coredump.tgz
!END of example!