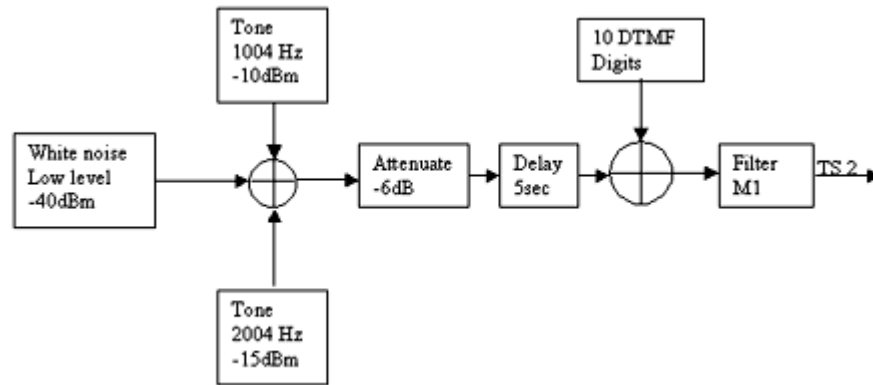# Transmit filtered tones and white noise

Script Description:

This script transmits two tones at different frequencies along with white noise and DTMF digits. The output is obtained through a filter.

Variation 1:

- Connect two PC's A and B . Run WCS script on PC A and verify the output on PC B. Do not run the GUI on PC A.
- Transmit a tone of 1004 hz with power -10dBm , white noise of -40dBm and tone of 2004 hz with power -15dBm.
- Add these three and attenuate it by -6 dBm
- Delay this output by 5 seconds.
- Sum this output with the dtmf digits and pass the output through a filter file 'g8-m1.xfr '.
- Observe the resultant output on timeslot 2
- Stop transmitting the tone, one can observe the white noise of -40dBm.

Script:

```
// Connection assumed: connect card1 and card2 from PC 'A' to card1 and card2 of PC 'B'
respectively.
// this script should not be run simultaneously with GUI
//MODE:SEQUENTIAL
//
// User needs to comment the commands according to his requirement
//
//BOARD SETTINGS...
//
//INTERFACE SETTINGS
set rx interface terminate #*;
//set rx interface monitor #*;
//set rx interface bridge #*;
wait 3000;
//
//FRAME FORMAT SETTINGS FOR T1
set superframe format esf #*;
//set superframe format d4 #*;
//
//FRAME FORMAT SETTINGS FOR E1
//set signaling mode cas #*;
//set signaling mode ccs #*;
```

```
//set crc4 on#*;
//set crc4 off #*;
//
//CLOCK SETTINGS
set tx clock source internal #*;
//set tx clock source recovered #*;
//set tx clock source external #*;
//
//LOOPBACK SETTINGS
//set inward driver loopback on #*;
//set outward driver loopback on #*;
set outward driver loopback off #*;
set inward driver loopback off #*;
wait 3000;
//
//- - - - - - - - - --Verification of initialization
//CHECKING FORMAT SETTINGS FOR T1
get superframe format #*;
//
//CHECKING FORMAT SETTINGS FOR E1
//get signaling mode #*;
//
//CHECKING OTHER SETTINGS FOR THE CARDS
get tx clock source #*;
get outward driver loopback #*;
get rx line frequency #*;
get rx line level #*;
wait 3000;
//
set latency 3;
set response 9;
//set priority default;
get response;
get latency;
get priority;
set latency default;
set response default;
// Connection assumed: connect card1 and card2 from PC 'A' to card1 and card2 of PC 'B'
respectively.
// this script should not be run simultaneously with GUI
//MODE:SEQUENTIAL
//
// User needs to comment the commands according to his requirement
//
//BOARD SETTINGS...
//
//INTERFACE SETTINGS
set rx interface terminate #*;
//set rx interface monitor #*;
//set rx interface bridge #*;
wait 3000;
//
//FRAME FORMAT SETTINGS FOR T1
set superframe format esf #*;
//set superframe format d4 #*;
//
//FRAME FORMAT SETTINGS FOR E1
//set signaling mode cas #*;
//set signaling mode ccs #*;
//set crc4 on#*;
//set crc4 off #*;
//
//CLOCK SETTINGS
set tx clock source internal #*;
//set tx clock source recovered #*;
//set tx clock source external #*;
```

```
//
//LOOPBACK SETTINGS
//set inward driver loopback on #*;
//set outward driver loopback on #*;
set outward driver loopback off #*;
set inward driver loopback off #*;
wait 3000;
//
//- - - - - - - - - --Verification of initialization
//CHECKING FRAMING FORMAT SETTINGS FOR T1
get superframe format #*;
//
//CHECKING FRAMING FORMAT SETTINGS FOR E1
//get signaling mode #*;
//
//CHECKING OTHER SETTINGS FOR THE CARDS
get tx clock source #*;
get outward driver loopback #*;
get rx line frequency #*;
get rx line level #*;
wait 3000;
//
set latency 3;
set response 9;
set priority default;
get response;
get latency;
get priority;
set latency default;
set response default;
//
//
tx(filter(sum(delay(atten(sum(tone(1004,-10), whitenoise(-40dbm), tone(2004,-15)), -
6),5000msec), dtmf digits("1234567890" ,-10,50,50)), "filter files/g8-m1.xfr"), #1:2) ;
//ENDING THE TASK
end task *;
```

Variation 2:

- Sum the tone of 1004 hz with power -10dbm ,white noise of -40dbm and tone of 2004 hz with power -15dbm.
- Attenuate it by -6dBm and delay the response by 5 seconds. This is output1
- Output2 is the sum of output1 and the DTMF digits.
- Output2 is the filtered by using 'g8-m1.xfr' filter file .The output form the filter is output3 .
- Output3 is transmitted through timeslot 2.

Script:

```
// Connection assumed: connect card1 and card2 from PC 'A' to card1 and card2 of PC 'B'
respectively.
// this script should not be run simultaneously with GUI
//MODE:SEQUENTIAL
//
// User needs to comment the commands according to his requirement
//
//BOARD SETTINGS...
//
//INTERFACE SETTINGS
set rx interface terminate #*;
//set rx interface monitor #*;
//set rx interface bridge #*;
wait 3000;
//
```

```
//FRAME FORMAT SETTINGS FOR T1
set superframe format esf #*;
//set superframe format d4 #*;
//
//FRAME FORMAT SETTINGS FOR E1
//set signaling mode cas #*;
//set signaling mode ccs #*;
//set crc4 on#*;
//set crc4 off #*;
//
//CLOCK SETTINGS
set tx clock source internal #*;
//set tx clock source recovered #*;
//set tx clock source external #*;
//
//LOOPBACK SETTINGS
//set inward driver loopback on #*;
//set outward driver loopback on #*;
set outward driver loopback off #*;
set inward driver loopback off #*;
wait 3000;
//
//- - - - - - - - - --Verification of initialization
//CHECKING FORMAT SETTINGS FOR T1
get superframe format #*;
//
//CHECKING FORMAT SETTINGS FOR E1
//get signaling mode #*;
//
//CHECKING OTHER SETTINGS FOR THE CARDS
get tx clock source #*;
get outward driver loopback #*;
get rx line frequency #*;
get rx line level #*;
wait 3000;
//
set latency 3;
set response 9;
//set priority default;
get response;
get latency;
get priority;
set latency default;
set response default;
//
//
dspop{ output1=delay(atten(sum(tone(1004,-10), whitenoise(-40dbm), tone(2004,-15)),-6
),5000msec), output2=sum(output1,dtmf digits("1234567890",-10,50,50)),
output3=filter(output2,"filter files/g8-m1.xfr"), tx( output3,#1:2) };
//
//ENDING THE TASK
end task *;
```