

All Patapsco ISDN products are capable of capturing all ISDN layer2/3 signalling between itself and any/all attached devices.

Patapsco's ISDN "Translation" program converts a captured trace into something perhaps more meaningful, as illustrated below.

"Raw" captured data

"Processed Data - Patapsco program

```
<SDT:0: RX-0c
<SDT:0: State change to G3_Active
<SDT:L2:0 Invalid TEI as not used (TEI: 64)
<SDT:L2:0 rx:00007087:00 40 2 SABME 1
<SDT:L2:0 Creating TEI :64
<SDT:L2:0 rx:00007186:00 40 2 SABME 1
<SDT:L2:0 TX:00007186:00 40 2 UA 1
<SDT:0: L2 New state:07
<SDT:0:L2 is running 64 0
<SDT:L2:0 rx:00007190:00 40 2 INFO 0 00 00 01 SETUP :04 03 80 90 a3 70 06
81 31 32 33 34 35 7d 02 91 81
```

```
<SDT:L2:0 TX:00007190:00 40 2 RR 0 01 --
<SDT:0: L3 Rx::Setup
<SDT:0: Newstate=01,ch=00
<SDT:0: ISDNC Rx:IN :Setup 00
<SIT:070305085835 3:Sys-:Incoming call Bri 1.1 - 12345/:- to Bri 2.1 using
Profile BRI 1 to BRI 2 (0)
<SDT:1: ISDNC Rx:OUT:Setup 00
<SDT:1: L3 Rx-L4::Setup 00
<SDT:1: State change to G2_Pending_Activation
<SDT:L2:1 TX:00007193:3f 7f 0 UI ID REMOVE 00 00 ff

<SDT:1: Newstate=06,ch=00
<SDT::Net:00:00,00:01,00:0:;Call accepted
<SDT:0: ISDNC Rx:OUT:More Info 00
<SDT:0: L3 Rx-L4::More-Info 00
<SDT:L2:0 TX:00007194:00 40 0 INFO 0 01 00 01 SETUP ACK ::18 01 89
```

```
<SDT:0: RX-0c
<SDT:0: State change to G3_Active
<SDT:L2:0 Invalid TEI as not used (TEI: 64)
<SDT:L2:0 rx:00007087:00 40 2 SABME 1
<SDT:L2:0 Creating TEI :64
<SDT:L2:0 rx:00007186:00 40 2 SABME 1
<SDT:L2:0 TX:00007186:00 40 2 UA 1
<SDT:0: L2 New state:07
<SDT:0:L2 is running 64 0
<SDT:L2:0 rx:00007190:00 40 2 INFO 0 00 00 01 SETUP :04 03 80 90 a3 70 06
81 31 32 33 34 35 7d 02 91 81
```

Port. 0 --->Received: SAPI: 00 TEI: 40 CRBit: 0x01 Dest. SETUP

```
1 00000100 INFORMATION ELEMENT : BEARER CAP (04)
2 00000011 IE LENGTH : 3 octets
3 1----- Extension Bit : Not Continued
-00----- Coding Standard : CCITT
---00000 Info Transfer Cap : Speech
4 1----- Extension Bit : Not Continued
-00----- Transfer Mode : Circuit Mode
---10000 Info Transfer Rate : 64 kbit/s
5 1----- Extension Bit : Not Continued
-01----- Layer 1 Identifier :
---00011 Layer 1 Protocol : G711 A-law
```

```
1 01110000 INFORMATION ELEMENT : CALLED PARTY NO. (70)
2 00000110 IE LENGTH : 6 octets
3 1----- Extension Bit : Not Continued
-000---- Type of Number : Unknown
----0001 Numbering Plan : ISDN
4 ***** Number : [12345]
```

```
1 01111101 INFORMATION ELEMENT : HIGH LAYER COMP (7d)
2 00000010 IE LENGTH : 2 octets
3 1----- Extension Bit : Not Continued
-0010001 Unknown Data : 17
4 1----- Extension Bit : Not Continued
-0000001 Unknown Data : 1
```

```
<SDT:L2:0 TX:00007190:00 40 2 RR 0 01 --
<SDT:0: L3 Rx::Setup
<SDT:0: Newstate=01,ch=00
<SDT:0: ISDNC Rx:IN :Setup 00
<SIT:070305085835 3:Sys-:Incoming call Bri 1.1 - 12345/:- to Bri 2.1 using
Profile BRI 1 to BRI 2 (0)
<SDT:1: ISDNC Rx:OUT:Setup 00
<SDT:1: L3 Rx-L4::Setup 00
<SDT:1: State change to G2_Pending_Activation
<SDT:L2:1 TX:00007193:3f 7f 0 UI ID REMOVE 00 00 ff
```

```
<SDT:1: Newstate=06,ch=00
<SDT::Net:00:00,00:01,00:0:;Call accepted
<SDT:0: ISDNC Rx:OUT:More Info 00
<SDT:0: L3 Rx-L4::More-Info 00
<SDT:L2:0 TX:00007194:00 40 0 INFO 0 01 00 01 SETUP ACK ::18 01 89
```

Port. 0 --->Transmitted: SAPI: 00 TEI: 40 CRBit: 0x01 Orig. SETUP ACK

```
1 00011000 INFORMATION ELEMENT : CHANNEL ID (18)
2 00000001 IE LENGTH : 1 octets
3 1----- Extension Bit : Not Continued
-0----- Intf Id Present : Interface Implicitly Identified
--0----- Interface Type : Basic Rate
---0----- Spare bit :
----1--- Pref/Excl : Exclusive
-----0-- D Chan Indicator : Not the D Channel
-----01 Info Chan Select : B1 Channel
```

<SDT:0: Newstate=02,ch=00
<SDT:1: RX-0c
<SDT:1: State change to G3_Active
<SDT:L2:1 TX:00007195:00 7f0 UI 01 SETUP ::04 03 80 90 a3 18 01 89 70 06
81 31 32 33 34 35 7d 02 91 81

<SDT:L2:0 rx:00007198:00 40 0 RR 0 01 --
<SDT:L2:1 Invalid TEI as not used (TEI: 64)
<SDT:L2:1 rx:00007212:00 40 2 SABME 1
<SDT:L2:1 Creating TEI :64
<SFP81a000000000000000001100
<SDT:L2:1 rx:00007311:00 40 2 SABME 1
<SDT:L2:1 TX:00007311:00 40 2 UA 1
<SDT:1: L2 New state:07
<SDT:1:L2 is running 64 0
<SDT:L2:1 rx:00007314:00 40 2 INFO 0 00 00 01 ALERT ::

<SDT:L2:1 TX:00007314:00 40 2 RR 0 01 --
<SDT:1: L3 Rx::Alert
<SDT:1: Newstate=07,ch=00
<SDT:1: ISDNC Rx:IN :Alert 00
<SDT::Net:00:00,00:01,00:2::Call answering
<SDT:0: ISDNC Rx:OUT:Alert 00
<SDT:0: L3 Rx-L4::Alert 00
<SDT:L2:0 TX:00007315:00 40 0 INFO 0 01 01 01 CALL PROCEEDING ::18 01
89

<SDT:0: Newstate=02,ch=00
<SDT:1: RX-0c
<SDT:1: State change to G3_Active
<SDT:L2:1 TX:00007195:00 7f0 UI 01 SETUP ::04 03 80 90 a3 18 01 89 70 06
81 31 32 33 34 35 7d 02 91 81

Port. 1 --->Transmitted: SAPI: 00 TEI: 7f CRBit: 0x01 Orig. SETUP

1 00000100 INFORMATION ELEMENT : BEARER CAP (04)
2 00000011 IE LENGTH : 3 octets
3 1----- Extension Bit : Not Continued
-00----- Coding Standard : CCITT
---00000 Info Transfer Cap : Speech
4 1----- Extension Bit : Not Continued
-00----- Transfer Mode : Circuit Mode
---10000 Info Transfer Rate : 64 kbit/s
5 1----- Extension Bit : Not Continued
-01----- Layer 1 Identifier :
---00011 Layer 1 Protocol : G711 A-law

1 00011000 INFORMATION ELEMENT : CHANNEL ID (18)
2 00000001 IE LENGTH : 1 octets
3 1----- Extension Bit : Not Continued
-0----- Intf Id Present : Interface Implicitly Identified
--0----- Interface Type : Basic Rate
---0----- Spare bit :
----1--- Pref/Excl : Exclusive
-----0-- D Chan Indicator : Not the D Channel
-----01 Info Chan Select : B1 Channel

1 01110000 INFORMATION ELEMENT : CALLED PARTY NO. (70)
2 00000110 IE LENGTH : 6 octets
3 1----- Extension Bit : Not Continued
-000----- Type of Number : Unknown
---0001 Numbering Plan : ISDN
4 ***** Number : [12345]

1 01111101 INFORMATION ELEMENT : HIGH LAYER COMP (7d)
2 00000010 IE LENGTH : 2 octets
3 1----- Extension Bit : Not Continued
-0010001 Unknown Data : 17
4 1----- Extension Bit : Not Continued
-0000001 Unknown Data : 1

<SDT:L2:0 rx:00007198:00 40 0 RR 0 01 --
<SDT:L2:1 Invalid TEI as not used (TEI: 64)
<SDT:L2:1 rx:00007212:00 40 2 SABME 1
<SDT:L2:1 Creating TEI :64
<SFP81a00000000000000000001100
<SDT:L2:1 rx:00007311:00 40 2 SABME 1
<SDT:L2:1 TX:00007311:00 40 2 UA 1
<SDT:1: L2 New state:07
<SDT:1:L2 is running 64 0
<SDT:L2:1 rx:00007314:00 40 2 INFO 0 00 00 01 ALERT ::

Port. 1 --->Received: SAPI: 00 TEI: 40 CRBit: 0x01 Dest. ALERT

<SDT:L2:1 TX:00007314:00 40 2 RR 0 01 --
<SDT:1: L3 Rx::Alert
<SDT:1: Newstate=07,ch=00
<SDT:1: ISDNC Rx:IN :Alert 00
<SDT::Net:00:00,00:01,00:2::Call answering
<SDT:0: ISDNC Rx:OUT:Alert 00
<SDT:0: L3 Rx-L4::Alert 00
<SDT:L2:0 TX:00007315:00 40 0 INFO 0 01 01 01 CALL PROCEEDING ::18 01
89

Port. 0 --->Transmitted: SAPI: 00 TEI: 40 CRBit: 0x01 Orig. CALL PROCEEDING

1 00011000 INFORMATION ELEMENT : CHANNEL ID (18)
2 00000001 IE LENGTH : 1 octets
3 1----- Extension Bit : Not Continued
-0----- Intf Id Present : Interface Implicitly Identified
--0----- Interface Type : Basic Rate
---0----- Spare bit :
----1--- Pref/Excl : Exclusive
-----0-- D Chan Indicator : Not the D Channel
-----01 Info Chan Select : B1 Channel