

# E1 R2 신호 구성 및 문제 해결

## 목차

[소개](#)

[사전 요구 사항](#)

[요구 사항](#)

[사용되는 구성 요소](#)

[표기 규칙](#)

[구성](#)

[AS5300: Cisco IOS - VFC\(Voice Feature Card\) 소프트웨어 호환성](#)

[E1 R2 구성](#)

[네트워크 다이어그램](#)

[구성](#)

[다음을 확인합니다.](#)

[문제 해결](#)

[E1 R2 실패 문제 해결](#)

[debug 및 show 명령](#)

[디버그 출력 샘플](#)

[관련 정보](#)

## 소개

이 문서에서는 E1 R2 신호 처리를 구현하는 데 필요한 점진적 명령 항목을 제공합니다. 이 문서에서는 debug 명령과 함께 문제 해결 정보도 제공합니다.

**참고:** 이 문서를 사용하기 전에 먼저 [E1 R2 신호 이론](#)을 읽는 것이 좋습니다.

## 사전 요구 사항

### 요구 사항

이 컨피그레이션을 시도하기 전에 다음 전제 조건을 충족해야 합니다.

- R2 신호 처리는 E1에만 적용됩니다.
- R2 신호 처리는 Cisco MC3810 라우터에서 지원되지 않습니다.
- Cisco 2600/3600 Series 라우터에서 R2 신호 처리를 실행하려면 이 하드웨어가 필요합니다 .VWIC-1MFT-E1 또는 VWIC-2MFT-E1 또는 VWIC-2MFT-E1-DI와 다음 음성 밀도 모듈 중 하나: [NM-HDV](#)(High Density Voice Network Module) 또는 NM-HD-2VE(2-slot IP communications voice/fax 네트워크 모듈).
- E1 컨트롤러(AS5x00, Cisco 2600/3600 라우터)에서 **ds0-group**(또는 Cisco IOS® 버전에 따라 **cas-group**) 명령을 정의합니다.

- **cas-custom** 명령을 사용하여 여러 국가 또는 지역에 대한 E1 R2 변형을 사용자 정의할 수 있습니다.

## 사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

- Cisco AS5300 with Cisco IOS Software 릴리스 12.0.7T

**참고:** E1 R2 신호 처리는 Cisco IOS Software 릴리스 12.1.2XH 및 12.1(3)T의 Cisco 2600/3600 Series 라우터에 도입되었습니다.

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우, 모든 명령어의 잠재적인 영향을 미리 숙지하시기 바랍니다.

## 표기 규칙

문서 규칙에 대한 자세한 내용은 [Cisco 기술 팁 표기 규칙](#)을 참조하십시오.

## 구성

이 섹션에서는 E1 R2를 구성하는 데 사용할 수 있는 정보를 제공합니다.

**참고:** 이 문서에서 사용하는 명령에 대한 추가 정보를 찾으려면 [명령 조회 도구](#)(등록된 고객만 해당)를 참조하십시오.

## AS5300: Cisco IOS - VFC(Voice Feature Card) 소프트웨어 호환성

Cisco AS5300 라우터에서 E1 R2 신호 처리를 구현하기 전에 Cisco IOS 소프트웨어 버전이 E1 모듈의 Cisco VCware와 호환되는지 확인하십시오. Cisco IOS 소프트웨어 호환성을 확인하려면 [Cisco AS5300용 Cisco VCWare Compatibility Matrix](#)를 참조하십시오. 버전이 호환되지 않으면 음성 카드의 DSP(디지털 신호 프로세서) 모듈이 로드되지 않고 음성 신호 처리가 발생하지 않습니다.

일반적으로 Cisco VCW의 버전이 Cisco IOS 소프트웨어와 호환되지 않는 경우 이 예와 같이 **show vfc slot\_number interface** 명령을 입력하여 볼 수 있습니다.

```
eefje#show vfc 1 interface
Rx: in ptr 18, outptr 0
Tx: in ptr 14 outptr 14
0 in hw queue, 0 queue head , 0 queue tail
Hardware is VFC out-of-band channel
Interface : state RESET DSP instance (0x61048284)
dsp_number 0, Channel ID 0
TX outstanding 0, max TX outstanding 0
Received 18 packets, 1087 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
121 bytes output, 14 frames output
0 bounce errors 0

DSP module 1 is not installed
DSP module 2 is not installed
DSP module 3 is not installed
```

DSP module 4 is not installed  
DSP module 5 is not installed

**show vfc slot\_number interface** 명령의 첫 번째 예제 출력에서 DSP 설치되지 않은 명령문은 해당 모듈 번호에 대해 버전이 호환되지 않음을 나타냅니다.

두 번째 출력 집합은 올바른 Cisco VCWare 버전이 로드된 DSP 모듈의 예입니다.

```
eefje#show vfc 1 interface
Rx: in ptr 24, outptr 0
TX: in ptr 15 outptr 15
0 in hw queue, 0 queue head , 0 queue tail
Hardware is VFC out-of-band channel
Interface : state RESET DSP instance (0x618C6088)
dsp_number 0, Channel ID 0
TX outstanding 0, max TX outstanding 0
Received 283288 packets, 15864278 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
1416459 bytes output, 141647 frames output
0 bounce errors 0
```

```
Slot 1, DSPM 1 (C542), DSP 1, Channel 1
State RESET, DSP instance (0x61914BDC)
TX outstanding 0, max TX outstanding 8
Received 0 packets, 0 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
0 bytes output, 0 frames output
0 bounce errors 0
```

```
Slot 1, DSPM 1 (C542), DSP 2, Channel 1
State RESET, DSP instance (0x6191510C)
TX outstanding 0, max TX outstanding 8
Received 0 packets, 0 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
0 bytes output, 0 frames output
0 bounce errors 0
```

설치된 Cisco VCWare 버전을 확인하려면 다음 예와 같이 **show vfc slot\_number version vcware** 명령을 입력합니다.

```
eefje#show vfc 1 version vcware
Voice Feature Card in Slot 1:

VCware Version : 4.10
ROM Monitor Version : 1.2
DSPware Version :
Technology : C542
```

**참고:** Cisco VCWare 기술 버전(c549 또는 c542)이 설치된 VFC DSP 기술(DSPM-542)과 일치하는지 확인합니다. 단일 집적도 음성 지원 또는 DSPM-549: 고밀도 음성 지원)

## E1 R2 구성

E1 R2를 구성하려면 다음 단계를 완료하십시오.

1. 전용 PBX(Automatic Branch Exchange) 또는 스위치에 연결하는 컨트롤러 E1을 설정합니다.  
.E1의 프레임링 및 선형코드가 올바르게 설정되었는지 확인합니다.
2. E1 프레임링의 경우 **CRC** 또는 **비 CRC**를 선택합니다.
3. E1 라인 인코딩의 경우 **HDB3** 또는 **AMI**를 선택합니다.

4. E1 클럭 소스의 경우 내부 또는 회선을 선택합니다.클럭 소스에 대한 요구 사항은 서로 다른 PBX에 있습니다.
5. [회선 신호 처리를 구성합니다.](#)
6. [인터레지스터 신호 처리를 구성합니다.](#)
7. `cas-custom` 명령을 사용하여 컨피그레이션을 사용자 지정합니다.

## [회선 신호 구성](#)

라인 신호 처리를 정의하려면 이 명령 시퀀스를 사용합니다.

```
eefje(config)#controller E1 0
eefje(config-controller)#ds0-group 1 timeslots 1-15 type ?
...
r2-analog          R2 ITU Q411
r2-digital         R2 ITU Q421
r2-pulse           R2 ITU Supplement 7
...
```

Cisco IOS Software 릴리스 11.3의 명령 시퀀스입니다.

```
eefje(config)#controller E1 0
eefje(config-controller)#cas-group 1 timeslot 1-15 type ?
...
```

**참고:** Cisco IOS Software Release 11.3에서 12.0으로 업그레이드하면 새 명령이 기존 명령을 자동으로 대체합니다.

## [인터레지스터 신호 구성](#)

이 명령 시퀀스 예는 서로 다른 유형의 인터레지스터 시그널링을 구성하는 방법을 보여줍니다.

```
eefje(config)#controller E1 0
eefje(config-controller)#ds0-group 1 timeslots 1-15 type r2-digital ?
dtmf                DTMF tone signaling
r2-compelled        R2 Compelled Register Signaling
r2-non-compelled    R2 Non Compelled Register Signaling
r2-semi-compelled   R2 Semi Compelled Register Signaling
```

R2 시그널링의 Cisco 구현에는 기본적으로 DNIS(Dialed Number Identification Service) 지원이 활성화되어 있습니다.ANI(Automatic Number Identification) 옵션을 활성화하면 DNIS 정보 수집이 계속 수행됩니다.ANI 옵션의 사양은 DNIS 수집을 비활성화하지 않습니다.DNIS는 호출되는 번호입니다.ANI는 발신자의 번호입니다.예를 들어 A라는 라우터가 B라는 라우터를 호출하도록 구성하면 DNIS 번호가 라우터 B에 할당되고 ANI 번호가 라우터 A에 할당됩니다. ANI는 발신자 ID와 유사합니다.

## [cas-custom 명령으로 E1 R2 사용자 지정](#)

`cas-custom` 명령 아래의 하위 명령은 국가 변형을 수용하기 위해 사용됩니다.또한 CAS(Channel Associated Signaling) 매개변수를 사용자 지정하기 위해 사용됩니다.이 명령 시퀀스는 모든 `cas-custom` 명령 옵션을 볼 수 있는 방법을 보여줍니다.

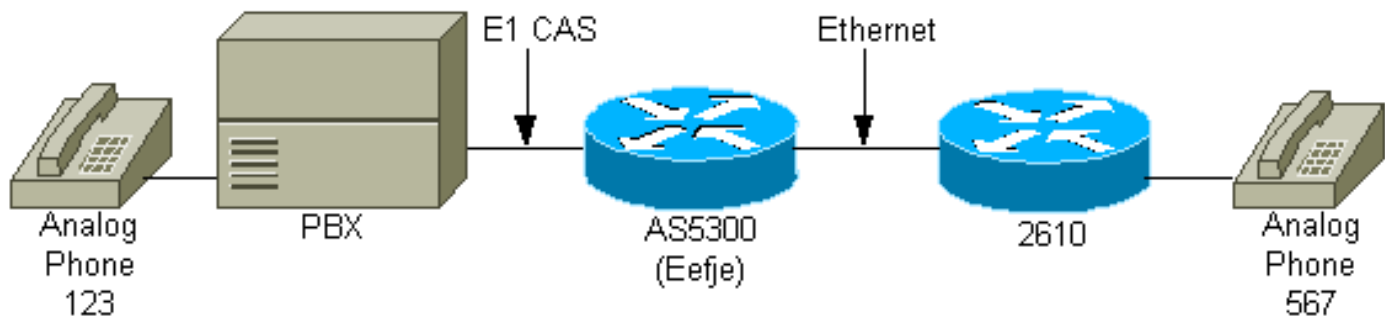
```
eefje(config)#controller E1 0
```

```
eefje(config-controller)#cas-custom 1
eefje(config-ctrl-cas)#?
CAS custom commands:
  ani-digits           Expected number of ANI digits
  ani-timeout          Timeout for ANI digits
  answer-guard-time   Wait Between Group-B Answer Signal And Line Answer
  answer-signal        Answer signal to be used
  caller-digits        Digits to be collected before requesting CallerID
  category             Category signal
  country              Country Name
  debounce-time        Debounce Timer
  default              Set a command to its defaults
  dnis-complete        Send I-15 after DNIS digits for dial-out
  dnis-digits          Expected number of DNIS digits
  exit                 Exit from cas custom mode
  groupa-callerid-end  Send Group-A Caller ID End
  invert-abcd          invert the ABCD bits before TX and after rx
  ka                   kA Signal
  kd                   KD Signal
  metering             R2 network is sending metering signal
  nc-congestion        Non Compelled Congestion signal
  no                   Negate a command or set its defaults
  proceed-to-send      Suppress proceed-to-send signal for pulsed line signaling
  release-ack          Send Release Acknowledgment to Clear Forward
  release-guard-time   Release Guard Timer
  request-category     DNIS Digits to be collected before requesting category
  seizure-ack-time     Seizure to Acknowledge timer
  unused-abcd          Unused ABCD bit values
```

**cas-custom** 명령 매개변수에 대한 자세한 내용은 [cas-custom 명령을 사용하여 E1 R2 사용자 지정을 참조하십시오](#).

## 네트워크 다이어그램

이 문서에서는 이 네트워크 설정을 사용합니다.



## 구성

이 문서의 목적은 E1 인터페이스에 표시되는 세 가지 R2 컨피그레이션입니다.

- [R2 디지털 비주축](#)
- [R2 디지털 반강제형](#)
- [R2 Digital Consumed ANI](#)

이 문서에서 설명하는 정보만 표시하도록 구성이 수정되었습니다.

<b>R2 디지털 비 주입을 위해 구성된 eefje</b>
hostname eefje

```

!
controller E1 0
  clock source line primary
  ds0-group 1 timeslots 1-15 type r2-digital r2-non-
  compelled
  cas-custom 1
  !--- For more information on these commands !--- refer
  to ds0-group and cas-custom.

!
voice-port 0:1
  cptone BE
  !--- The cptone command is country specific. For more !-
  -- information on this command, refer to cptone .

!
dial-peer voice 123 pots
  destination-pattern 123
  direct-inward-dial
  port 0:1
  prefix 123
!
dial-peer voice 567 voip
  destination-pattern 567
  session target ipv4:2.0.0.2
!

```

## R2 Digital Semi-Compmed용으로 구성된 eefje

```

hostname eefje
!
controller E1 0
  clock source line primary
  ds0-group 1 timeslots 1-15 type r2-digital r2-semi-
  compelled
  cas-custom 1
  !--- For more information on these commands !--- refer
  to ds0-group and cas-custom .

!
voice-port 0:1
  cptone BE
  !--- The cptone command is country specific. For more !-
  -- information on this command, refer to cptone .

dial-peer voice 123 pots
  destination-pattern 123
  direct-inward-dial
  port 0:1
  prefix 123
!
dial-peer voice 567 voip
  destination-pattern 567
  session target ipv4:2.0.0.2
!

```

## R2 Digital Consumed ANI용으로 구성된 eefje

```

hostname eefje
! controller E1 0 clock source line primary ds0-group
1 timeslots 1-15 type r2-digital r2-compelled ani cas-
custom 1
!--- For more information on these commands !--- refer

```

```
to ds0-group and cas-custom .

voice-port 0:1 cptone BE
!--- The cptone command is country specific. For more !-
-- information on this command, refer to cptone .

dial-peer voice 123 pots destination-pattern 123 direct-
inward-dial port
0:1 prefix 123
!
dial-peer voice 567 voip destination-pattern 567 session
target ipv4:2.0.0.2
!
```

## 다음을 확인합니다.

현재 이 구성에 대해 사용 가능한 확인 절차가 없습니다.

## 문제 해결

이 섹션에서는 컨피그레이션 문제를 해결하는 데 사용할 수 있는 정보를 제공합니다.

### E1 R2 실패 문제 해결

이 컨피그레이션과 관련된 문제 해결 정보입니다. 컨피그레이션 문제를 해결하려면 다음 지침을 따르십시오.

- 컨트롤러 E1 0이 작동 중인지 확인합니다. 작동이 중지된 경우 프레이밍, 회선 코딩, 클럭 소스, 경보, 케이블 교체, 카드 재장착 등을 확인합니다. [cas-custom Command 문서와 함께 E1 R2 Customization](#)을 참조로 사용합니다.
- AS5300을 사용하는 경우 DSP가 `show vfc slot number interface` 명령과 함께 올바르게 설치되었는지 확인합니다.
- 수신한 숫자가 발신 피어를 선택하는 데 사용되도록 일반 POTS(Old Telephone Service) 피어에서 DID(Direct Inward Dial)를 구성합니다.
- 음성 [포트](#)에서 [cptone](#)(cptone은 해당 국가에만 해당)을 지정합니다. `cas-custom country` 명령과 일치시키려면 `cponeccountry` 명령을 구성해야 합니다. cptone 매개 변수는 특정 국가에 대한 통화 진행 신호음을 설정하며, 더 중요한 것은 국가에 따라 인코딩을 법률 또는 법으로 설정합니다. 미국의 기본 인코딩은 u-law입니다.
- 회선을 일치시키고 스위치 컨피그레이션에 신호 규정을 등록합니다.
- 이 문서에 표시된 일부 [디버그](#)를 켜고 출력을 검토합니다.
- 라우터와 PBX 또는 스위치 간의 통신을 확인합니다. 줄이 잡혔나요? 라우터가 숫자를 수신합니까/전송합니까? 통화를 지우는 면을 확인합니다. 가능하면 Cisco.com에서 제공되는 최신 Cisco IOS 소프트웨어 릴리스를 사용하십시오.

### debug 및 show 명령

일부 `show` 명령은 [출력 인터프리터 툴](#)에서 지원되는데(등록된 고객만), 이 툴을 사용하면 `show` 명령 출력의 분석 결과를 볼 수 있습니다.

참고: `debug` 명령을 실행하기 전에 [디버그 명령에 대한 중요 정보를 참조하십시오](#).

참고: Cisco IOS Software 릴리스 12.0의 경우 다음 디버깅을 사용합니다.

- **debug cas** - 회선 신호용
- **debug csm voice** - interregister 신호용.
- **debug vtsp all** - PBX와 라우터 간에 모든 메시지(숫자)의 출력을 교환하려면

Cisco IOS Software 릴리스 IOS 11.3의 경우 다음 명령을 사용합니다.

- **modem-mgmt csm debug-rbs** - 회선 신호(먼저 서비스 내부를 구성 모드에서 지정해야 합니다.)
  - **debug csm voice** - interregister 신호용.
  - **debug vtsp all** - PBX와 라우터 간에 모든 메시지(숫자)의 출력을 교환하려면
- AS5400 및 AS5350 플랫폼의 경우 다음 디버깅을 사용합니다.

- **debug sigsm r2** - 인터레지스터 신호용
- **debug vtsp all** - PBX와 라우터 간에 모든 메시지(숫자)의 출력을 교환하려면

## 디버그 출력 샘플

이 문서에는 앞서 세 가지 다른 컨피그레이션이 표시되었으므로 다음 세 가지 디버깅이 있습니다.

### R2 디지털 비주축:567에 걸려오는 전화

이 디버그 출력을 더 잘 이해하려면 [E1 R2 신호 이론](#)을 참조하십시오.

```
eefje#show debug
CAS:
Channel Associated Signaling debugging is on
CSM Voice:
Voice Call Switching Module debugging is on
Voice Telephony session debugging is on
Voice Telephony dsp debugging is on
Voice Telephony error debugging is on
eefje#
eefje#
eefje#
Jan 6 10:41:28.677: from NEAT(0): (0/0): Rx SEIZURE (ABCD=0001)
Jan 6 10:41:28.717: VDEV_ALLOCATE: failed to allocate a device
Jan 6 10:41:28.717: VDEV_ALLOCATE: 1/28 is allocated
Jan 6 10:41:28.721: csm_vtsp_init_tdm (voice_vdev=0x620BF874)
Jan 6 10:41:28.721: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 2,
dspm 1, dsp 5, dsp_channel 1
Jan 6 10:41:28.721: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 5,
channel 3, bank 1, bp_channel 4, BP_stream 255
Jan 6 10:41:28.721: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0018): EVENT_CALL_DIAL_IN
at slot 2 and port 16
Jan 6 10:41:28.721: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT at slot 2,
port 16
Jan 6 10:41:28.721: csm_vtsp_start_digit_collect (voice_vdev=0x620BF874)
Jan 6 10:41:28.721: Enter csm_connect_pri_vdev function
Jan 6 10:41:28.721: csm_connect_pri_vdev:tdm_allocate_BP_ts()call. BP TS allocated
at BP_stream0, BP_Ch28,vdev_common 0x6 20BF8E4
Jan 6 10:41:28.721: to NEAT:(cid0018) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan0
Jan 6 10:41:28.721: vtsp_do_call_setup_ind
Jan 6 10:41:28.721: vtsp_do_call_setup_ind: Call ID=65681, guid=61FAF610
Jan 6 10:41:28.721: vtsp_do_call_setup_ind: type=0, under_spec=0, name=, id0=0,
```



id1=0, id2=0, calling=, called=  
Jan 6 10:41:28.721: vtsp\_do\_call\_setup\_ind: redirect DN = reason =  
Ovtsp\_open\_voice\_and\_set\_params  
Jan 6 10:41:28.721: dsp\_close\_voice\_channel: [0:1:0] packet\_len=8 channel\_id  
=8529 packet\_id=75  
Jan 6 10:41:28.721: dsp\_open\_voice\_channel\_20: [0:1:0] packet\_Len=16 channel\_id  
=8529 packet\_id=74 alaw\_ulaw\_select=1 associated\_signaling\_channel=0 time\_slot=0  
serial\_port=0  
Jan 6 10:41:28.721: dsp\_encap\_config\_20: [0:1:0] packet\_Len=24 channel\_id=8529  
packet\_id=92 TransportProtocol 2 t\_ssrc=0x0 r\_ssrc=0x0 t\_vpxcc=0x0 r\_vpxcc=0x0  
Jan 6 10:41:28.721: dsp\_set\_payout: [0:1:0] packet\_Len=18 channel\_id=8529  
packet\_id=76 mode=1 initial=60 min=4 max=200 fax\_nom=300  
Jan 6 10:41:28.721: dsp\_echo\_canceller\_control: [0:1:0] packet\_Len=10  
channel\_id=8529 packet\_id=66 flags=0x0  
Jan 6 10:41:28.721: dsp\_set\_gains: [0:1:0] packet\_Len=12 channel\_id=8529  
packet\_id=91 in\_gain=0 out\_gain=0  
Jan 6 10:41:28.721: dsp\_vad\_enable: [0:1:0] packet\_Len=10 channel\_id=8529  
packet\_id=78 thresh=-38  
Jan 6 10:41:28.721: dsp\_voice\_mode: [0:1:0] packet\_Len=24 channel\_id=8529  
packet\_id=73 coding\_type=1 voice\_field\_size=80 V AD\_flag=0 echo\_length=64  
comfort\_noise=1 inband\_detect=1 digit\_relay=2  
AGC\_flag=0vtsp\_do\_r2\_start\_digit(): dsp\_dtmf\_mode()  
dsp\_dtmf\_mode(VTSP\_TONE\_R2\_MF\_FORWARD\_MODE)  
Jan 6 10:41:28.725: dsp\_dtmf\_mode: [0:1:0] packet\_Len=10 channel\_id=8529  
packet\_id=65 dtmf\_or\_mf=1vtsp\_do\_r2\_start\_digit():fsm\_push(vtsp\_r2\_state\_table)  
Jan 6 10:41:28.725: csm\_vtsp\_call\_setup\_resp (vdev\_info=0x620BF874,  
vtsp\_cdb=0x621C5F3C)  
Jan 6 10:41:28.725: csm\_vtsp\_call\_setup\_resp:vdev\_common BP TS allocatedat  
BP\_stream0,BP\_Ch28  
Jan 6 10:41:28.725: csm\_vtsp\_call\_setup\_resp:dst\_tdm\_chnl call. BP TS allocatedat  
stream 5, chan 3,BP\_stream 255, BP\_ch 4  
Jan 6 10:41:28.725: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 5, chan 3,BP\_stream 0, BP\_ch 28  
Jan 6 10:41:28.725: CSM\_PROC\_IC1\_COLLECT\_ADDR\_INFO: CSM\_EVENT\_MODEM\_OFFHOOK  
(DNIS=, ANI=) at slot 2, port 16  
Jan 6 10:41:28.725: R2 Incoming Voice(2/16): DSX (E1 0:0): STATE: R2\_IN\_IDLE R2  
**Got Event R2\_START**  
Jan 6 10:41:28.821: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(0018):EVENT\_START\_RX\_TONE at slot 2  
and port 16  
Jan 6 10:41:28.821: from NEAT(0): (0/0): **TX SEIZURE\_ACK** (ABCD=1101)  
*!--- Digit 5 is sent: Forward Signal Group I-5.* Jan 6 10:41:29.233: vtsp\_process\_dsp\_message:  
**MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=5,**  
rtp\_timestamp=0x0CA95D43 dc\_digit\_up  
Jan 6 10:41:29.233: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x621C5F3C) received digit (5)  
Jan 6 10:41:29.233: CSM voice (2/16): Rcvd Digit detected(5)  
Jan 6 10:41:29.233: R2 Incoming Voice(2/16): DSX (E1 0:0):  
**STATE: R2\_IN\_COLLECT\_DNIS R2**  
Got Event 5  
Jan 6 10:41:29.365: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=5,  
duration=8321dc\_digit  
Jan 6 10:41:29.365: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x621C5F3C) received digit (5)  
Jan 6 10:41:29.365: CSM voice (2/16): Rcvd Digit detected(5)  
Jan 6 10:41:29.365: R2 Incoming Voice(2/16): DSX (E1 0:0):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**  
*!--- Digit 6 is sent: Forward Signal Group I-6.* Jan 6 10:41:29.593: vtsp\_process\_dsp\_message:  
**MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=6,**  
rtp\_timestamp=0x0CA95D43 dc\_digit\_up  
Jan 6 10:41:29.593: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x621C5F3C) received digit (6)  
Jan 6 10:41:29.593: CSM voice (2/16): Rcvd Digit detected(6)  
Jan 6 10:41:29.593: R2 Incoming Voice(2/16): DSX (E1 0:0):  
**STATE: R2\_IN\_COLLECT\_DNIS R2**  
Got Event 6  
Jan 6 10:41:29.725: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=6,

duration=8321dc\_digit  
Jan 6 10:41:29.725: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x621C5F3C) received digit (6)  
Jan 6 10:41:29.725: CSM voice (2/16): Rcvd Digit detected(6)  
Jan 6 10:41:29.725: R2 Incoming Voice(2/16): DSX (E1 0:0):  
**STATE: R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**  
*!--- Digit 7 is sent: Forward Signal Group I-7.* Jan 6 10:41:29.953: vtsp\_process\_dsp\_message:  
**MSG\_TX\_DTMF\_DIGIT\_BEGIN:**  
**digit=7, rtp\_timestamp=0x0CA95D43 dc\_digit\_up**  
Jan 6 10:41:29.953: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x621C5F3C)  
received digit (7)  
Jan 6 10:41:29.953: CSM voice (2/16): Rcvd Digit detected(7)  
Jan 6 10:41:29.953: R2 Incoming Voice(2/16): DSX (E1 0:0):  
STATE:R2\_IN\_COLLECT\_DNIS R2  
**Got Event 7**  
Jan 6 10:41:30.085: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF:  
digit=7, duration=8321dc\_digit  
Jan 6 10:41:30.085: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x621C5F3C)received digit (7)  
Jan 6 10:41:30.085: CSM voice (2/16): Rcvd Digit detected(7)  
Jan 6 10:41:30.085: R2 Incoming Voice(2/16): DSX (E1 0:0):  
STATE: R2\_IN\_COLLECT\_DNIS R2  
**Got Event R2\_TONE\_OFF**  
*!--- Timeout: 3 seconds (default timer - AS5300 assumes DNIS is finished).* Jan 6 10:41:32.953:  
R2 Incoming Voice(2/16): DSX (E1 0:0): STATE: R2\_IN\_COLLECT\_DNIS R2 **Got Event R2\_TONE\_TIMER**  
*!--- Send digit 6: Backward Signal Group B-6 (subscriber's line free-charge).* Jan 6  
10:41:32.953: vtsp\_r2\_generate\_digits: vdev\_common=0x620BF8E4, string=567dc\_dial()  
vtsp\_dial\_nopush **dsp\_dtmf\_dialing(): dial\_string = 6#**  
  
Jan 6 10:41:32.953: dsp\_dtmf\_dialing: [0:1:0] packet\_Len=36 channel\_id=8529  
packet\_id=90 string=6# digits=2, time\_on=150, time\_off=30  
Jan 6 10:41:32.953:& digit=e, components=2, freq\_of\_first=900,  
freq\_of\_second=780, amp\_of\_first=8192, amp\_of\_second=8192  
Jan 6 10:41:32.953: digit=o, components=2, freq\_of\_first=0,  
freq\_of\_second=0, amp\_of\_first=1, amp\_of\_second=1  
Jan 6 10:41:33.313: vtsp\_process\_dsp\_message:  
**MSG\_TX\_DIALING\_DONE dc\_dialing\_done()**  
Jan 6 10:41:33.313: R2 Incoming Voice(2/16): DSX (E1 0:0):  
STATE:R2\_IN\_ANSWER\_PULSE R2  
**Got Event R2\_DIGITS\_GENR2\_ALERTING**  
Jan 6 10:41:34.313: R2 Incoming Voice(2/16): DSX (E1 0:0):  
STATE: R2\_IN\_ANSWER\_PULSE R2  
**Got Event R2\_TONE\_TIMER**  
Jan 6 10:41:34.313: R2\_IN\_IDLE:2 r2\_in\_connect called  
Jan 6 10:41:34.313: CSM\_PROC\_IC1\_COLLECT\_ADDR\_INFO:  
CSM\_EVENT\_ADDR\_INFO\_COLLECTED (DNIS=567, ANI=) at slot 2, port 16  
Jan 6 10:41:34.313: vtsp\_tsp\_call\_accept\_check (sdb=0x61B8F0E0, calling\_number=  
called\_number=567): peer\_tag=0  
Jan 6 10:41:34.313: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 10:41:34.313: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 10:41:34.313: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 10:41:34.313: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 10:41:34.313: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 10:41:34.313: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 10:41:34.313: CSM\_PROC\_IC3\_WAIT\_FOR\_RES\_RESP: CSM\_EVENT\_RESOURCE\_OK at slot 2,  
port 16  
Jan 6 10:41:34.313: vtsp\_ic\_switch : (voice\_vdev= 0x620BF874)  
Jan 6 10:41:34.313: vtsp\_tsp\_call\_switch\_ind (cdb=0x621C5F3C, tsp\_info=0x620BF874,  
calling\_number= called\_number=567 redir ect\_number=):  
peer\_tag=123dc\_switch: fsm\_pop()  
Jan 6 10:41:34.313: vtsp\_do\_call\_setup\_ind  
Jan 6 10:41:34.313: vtsp\_do\_call\_setup\_ind: Call ID=65683, guid=61FAF610  
Jan 6 10:41:34.313: vtsp\_do\_call\_setup\_ind: type=0, under\_spec=0,  
name=ab^Lx, id0=1, id1=0, id2=0, calling=123, called=567  
Jan 6 10:41:34.317: dsp\_cp\_tone\_off: [] packet\_Len=8 channel\_id=8529 packet\_id=71

Jan 6 10:41:34.317: dsp\_idle\_mode: [] packet\_Len=8 channel\_id=8529 packet\_id=68  
Jan 6 10:41:34.317: dsp\_close\_voice\_channel: [] packet\_Len=8 channel\_id=8529  
packet\_id=75  
Jan 6 10:41:34.317: vtsp\_timer\_stop: 67475758  
Jan 6 10:41:34.317: csm\_vtsp\_call\_setup\_resp (vdev\_info=0x620BF874,  
vtsp\_cdb=0x621C5F3C)  
Jan 6 10:41:34.317: csm\_vtsp\_call\_setup\_resp:vdev\_common  
BP TS allocatedat BP\_stream0,  
BP\_Ch28  
Jan 6 10:41:34.317: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 5, chan 3,BP\_stream 0, BP\_ch 28  
Jan 6 10:41:34.317: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 5, chan 3,BP\_stream 0, BP\_ch 28vt sp\_open\_voice\_and\_set\_params  
Jan 6 10:41:34.317: dsp\_close\_voice\_channel: [0:1 (54)] packet\_Len=8 channel\_id=8529  
packet\_id=75  
Jan 6 10:41:34.317: dsp\_open\_voice\_channel\_20: [0:1 (54)] packet\_Len=16  
channel\_id=8529  
packet\_id=74 alaw\_ulaw\_select=1 associated\_signaling\_channel=0 time\_slot=0  
serial\_port=0  
Jan 6 10:41:34.317: dsp\_encap\_config\_20: [0:1 (54)] packet\_Len=24 channel\_id=8529  
packet\_id=92 TransportProtocol 2 t\_ssrc=0x0 r\_ssrc=0x0 t\_vpxcc=0x0 r\_vpxcc=0x0  
Jan 6 10:41:34.317: dsp\_set\_payout: [0:1 (54)] packet\_Len=18 channel\_id=8529  
packet\_id=76 mode=1 initial=60 min=4 max=200 fax\_nom=300  
Jan 6 10:41:34.317: dsp\_echo\_canceller\_control: [0:1 (54)] packet\_Len=10  
channel\_id=8529  
packet\_id=66 flags=0x0  
Jan 6 10:41:34.317: dsp\_set\_gains: [0:1 (54)] packet\_Len=12  
channel\_id=8529 packet\_id=91  
in\_gain=0 out\_gain=0  
Jan 6 10:41:34.317: dsp\_vad\_enable: [0:1 (54)] packet\_Len=10  
channel\_id=8529 packet\_id=78  
thresh=-38act\_proceeding  
Jan 6 10:41:34.321: csm\_vtsp\_call\_proceeding:DST\_tdm\_chnl call.  
BP TS allocatedstream 5,  
chan 3,BP\_stream 0, BP\_ch 28act\_alert  
Jan 6 10:41:34.345: vtsp\_ring\_noan\_timer\_start: 67475761  
Jan 6 10:41:34.345: csm\_vtsp\_call\_alert (vtsp\_cdb=0x621C5F3C)act\_bridge act\_caps\_ind  
Jan 6 10:41:34.589: act\_caps\_ind:Encap 1, Vad 2, Codec 0x4, CodecBytes 20,  
FaxRate 2, FaxBytes 20 SignalType 0  
DtmfRelay 1, Modem lact\_caps\_ack  
Jan 6 10:41:34.589: dsp\_idle\_mode: [0:1 (54)] packet\_Len=8  
channel\_id=8529 packet\_id=68  
Jan 6 10:41:34.589: act\_caps\_ack: codec = 15, ret = 1  
Jan 6 10:41:34.589: dsp\_cp\_tone\_off: [0:1 (54)] packet\_Len=8 channel\_id=8529  
packet\_id=71  
Jan 6 10:41:34.589: dsp\_idle\_mode: [0:1 (54)] packet\_Len=8  
channel\_id=8529 packet\_id=68  
Jan 6 10:41:34.589: dsp\_encap\_config\_20: [0:1 (54)] packet\_Len=24 channel\_id=8529  
packet\_id=92 TransportProtocol 2 t\_ssrc=0x0 r\_ssrc=0x0 t\_vpxcc=0x0 r\_vpxcc=0x0  
Jan 6 10:41:34.589: dsp\_voice\_mode: [0:1 (54)] packet\_Len=24 channel\_id=8529  
packet\_id=73 coding\_type=20 voice\_field\_size=20 VAD\_flag=1 echo\_length=64  
comfort\_noise=1 inband\_detect=1 digit\_relay=2 AGC\_flag=0act\_alert\_connect  
Jan 6 10:41:36.857: vtsp\_ring\_noan\_timer\_stop: 67476012  
Jan 6 10:41:36.857: dsp\_cp\_tone\_off: [0:1 (54)] packet\_Len=8 channel\_id=8529  
packet\_id=71  
Jan 6 10:41:36.857: csm\_vtsp\_call\_connect (vtsp\_cdb=0x621C5F3C,  
voice\_vdev=0x620BF874)  
Jan 6 10:41:36.857: CSM\_IC5\_WAIT\_FOR\_SWITCH\_OVER: CSM\_EVENT\_MODEM\_OFFHOOK  
at slot 2, port 16  
Jan 6 10:41:36.917: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(0018): EVENT\_CHANNEL\_CONNECTED  
at slot 2 and port 16  
Jan 6 10:41:36.917: CSM\_PROC\_IC6\_WAIT\_FOR\_CONNECT: CSM\_EVENT\_DSX0\_CONNECTED  
at slot 2, port 16  
Jan 6 10:41:36.921: from NEAT(0): (0/0): **TX ANSWERED**(ABCD=0101)

eefje#

## R2 디지털 반주형:567에 걸려오는 전화

이 디버그 출력을 더 잘 이해하려면 [E1 R2 신호 이론을](#) 참조하십시오.

eefje#show debug

CAS:

Channel Associated Signaling debugging is on

CSM Voice:

Voice Call Switching Module debugging is on

Voice Telephony session debugging is on

Voice Telephony dsp debugging is on

Voice Telephony error debugging is on

eefje#

eefje#

eefje#

```
Jan 6 09:53:42.389: from NEAT(0): (0/2): Rx SEIZURE(ABCD=0001)
Jan 6 09:53:42.433: VDEV_ALLOCATE: failed to allocate a device
Jan 6 09:53:42.433: VDEV_ALLOCATE: 1/27 is allocated
Jan 6 09:53:42.433: csm_vtsp_init_tdm (voice_vdev=0x620BF320)
Jan 6 09:53:42.433: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 2, dspm 1,
  dsp 4, dsp_channel 4
Jan 6 09:53:42.433: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 7, channel 0,
  bank 4, BP_channel 3, BP_stream 255
Jan 6 09:53:42.433: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0017): EVENT_CALL_DIAL_IN
  at slot 2 and port 15
Jan 6 09:53:42.433: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT
  at slot 2, port 15
Jan 6 09:53:42.433: csm_vtsp_start_digit_collect (voice_vdev=0x620BF320)
Jan 6 09:53:42.433: Enter csm_connect_pri_vdev function
Jan 6 09:53:42.433: csm_connect_pri_vdev:tdm_allocate_BP_Ts()call. BP TS allocated
  at BP_stream0, BP_Ch27,vdev_common 0x6 20BF390
Jan 6 09:53:42.433: to NEAT:(cid0017) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan2
Jan 6 09:53:42.433: vtsp_do_call_setup_ind
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: Call ID=65675, guid=61FAF610
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: type=0, under_spec=0, name=, id0=0,
  id1=0, id2=0, calling=, called=
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: redirect DN = reason =
  0vtsp_open_voice_and_set_params
Jan 6 09:53:42.433: dsp_close_voice_channel: [0:1:2] packet_Len=8 channel_id=8516
  packet_id=75
Jan 6 09:53:42.433: dsp_open_voice_channel_20: [0:1:2] packet_Len=16
  channel_id=8516
  packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
  time_slot=1 serial_port=1
Jan 6 09:53:42.433: dsp_encap_config_20: [0:1:2] packet_Len=24 channel_id=8516
  packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 09:53:42.433: dsp_set_payout: [0:1:2] packet_Len=18 channel_id=8516
  packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 6 09:53:42.433: dsp_echo_canceller_control: [0:1:2]
  packet_Len=10 channel_id=8516
  packet_id=66 flags=0x0
Jan 6 09:53:42.437: dsp_set_gains:[0:1:2] packet_Len=12
  channel_id=8516 packet_id=91
  in_gain=0 out_gain=0
Jan 6 09:53:42.437: dsp_vad_enable: [0:1:2] packet_Len=10 channel_id=8516
  packet_id=78 thresh=-38
Jan 6 09:53:42.437: dsp_voice_mode: [0:1:2] packet_Len=24 channel_id=8516
  packet_id=73 coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
  comfort_noise=1 inband_detect=1 digit_relay=2 AGC_flag=0vtsp_do_r2_start_digit():
  dsp_dtmf_mode() dsp_dtmf_mode(VTSP_TONE_R2_MF_FORWARD_MODE)
```

Jan 6 09:53:42.437: dsp\_dtmf\_mode: [0:1:2] packet\_Len=10 channel\_id=8516  
packet\_id=65 dtmf\_or\_mf=lvtsr\_do\_r2\_start\_digit(): fsm\_push(vtsr\_r2\_state\_table)  
Jan 6 09:53:42.437: csm\_vtsr\_call\_setup\_resp (vdev\_info=0x620BF320,  
vtsr\_cdb=0x621C5F3C)  
Jan 6 09:53:42.437: csm\_vtsr\_call\_setup\_resp:vdev\_common BP  
TS allocatedat BP\_stream0,  
BP\_Ch27  
Jan 6 09:53:42.437: csm\_vtsr\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 7, chan 0,BP\_stream 255, BP\_ch 3  
Jan 6 09:53:42.437: csm\_vtsr\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 7, chan 0,BP\_stream 0, BP\_ch 27  
Jan 6 09:53:42.437: CSM\_PROC\_IC1\_COLLECT\_ADDR\_INFO: CSM\_EVENT\_MODEM\_OFFHOOK  
(DNIS=, ANI=) at slot 2, port 15  
Jan 6 09:53:42.437: R2 Incoming Voice(2/15): DSX (E1 0:2): STATE:R2\_IN\_IDLE R2  
Got Event R2\_START  
Jan 6 09:53:42.533: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(0017):EVENT\_START\_RX\_TONE  
at slot 2 and port 15  
Jan 6 09:53:42.533: from NEAT(0): (0/2): **TX SEIZURE ACK (ABCD=1101)**  
*!--- Digit 5 is sent: Forward Signal Group I-5.* Jan 6 09:53:42.641: vtsr\_process\_dsp\_message:  
MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=5, rtp\_timestamp=0x9330B42B dc\_digit\_up Jan 6 09:53:42.641:  
csm\_vtsr\_digit\_ready\_up (vtsr\_cdb=0x621C5F3C) received digit (5) Jan 6 09:53:42.641: CSM voice  
(2/15): Rcvd Digit detected(5) Jan 6 09:53:42.641: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event 5**  
*!--- Digit 1 sent (pulse): Backward Signal Group A-1 (Send next digit) !--- "#" this indicates  
that it is a pulse).* Jan 6 09:53:42.641: vtsr\_r2\_generate\_digits: vdev\_common=0x620BF390,  
string=5dc\_dial() vtsr\_dial\_nopush **dsp\_dtmf\_dialing(): dial\_string = 1#**  
Jan 6 09:53:42.641: dsp\_dtmf\_dialing: [0:1:2] packet\_Len=36 channel\_id=8516  
packet\_id=90 string=1# digits=2, time\_on=150, time\_off=30  
Jan 6 09:53:42.641: digit=` , components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 6 09:53:42.641: digit=o, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
Jan 6 09:53:42.741: vtsr\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=5,  
duration=8291dc\_digit  
Jan 6 09:53:42.741: csm\_vtsr\_digit\_ready (vtsr\_cdb=0x621C5F3C) received digit (5)  
Jan 6 09:53:42.741: CSM voice (2/15): Rcvd Digit detected(5)  
Jan 6 09:53:42.741: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**  
*!--- Digit 6 is sent: Forward Signal Group I.* Jan 6 09:53:42.881: vtsr\_process\_dsp\_message:  
MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=6, rtp\_timestamp=0x9330B42B dc\_digit\_up Jan 6 09:53:42.881:  
csm\_vtsr\_digit\_ready\_up (vtsr\_cdb=0x621C5F3C)received digit (6) Jan 6 09:53:42.881: CSM voice  
(2/15): Rcvd Digit detected(6) Jan 6 09:53:42.881: R2 Incoming Voice(2/15): DSX (E1 0:2):  
STATE:R2\_IN\_COLLECT\_DNIS R2 **Got Event 6**  
*!--- Digit 1 sent (pulse): Backward Signal Group A-1. (Send next digit.)* Jan 6 09:53:42.881:  
vtsr\_r2\_generate\_digits: vdev\_common=0x620BF390, string=56dc\_dial() vtsr\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 1#**  
Jan 6 09:53:42.881: dsp\_dtmf\_dialing: [0:1:2] packet\_Len=36 channel\_id=8516  
packet\_id=90 string=1# digits=2, time\_on=150, time\_off=30  
Jan 6 09:53:42.881: digit=` , components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 6 09:53:42.881: digit=o, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
Jan 6 09:53:42.981: vtsr\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=6,  
duration=8291dc\_digit  
Jan 6 09:53:42.981: csm\_vtsr\_digit\_ready (vtsr\_cdb=0x621C5F3C) received digit (6)  
Jan 6 09:53:42.981: CSM voice (2/15): Rcvd Digit detected(6)  
Jan 6 09:53:42.981: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**

**Got Event R2\_TONE\_OFF**  
*!--- Digit 7 is sent: Forward Signal Group I-7.* Jan 6 09:53:43.121: vtsp\_process\_dsp\_message:  
**MSG\_TX\_DTMF\_DIGIT\_BEGIN:**  
digit=7, rtp\_timestamp=0x9330B42B dc\_digit\_up  
Jan 6 09:53:43.121: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x621C5F3C)received digit (7)  
Jan 6 09:53:43.121: CSM voice (2/15): Rcvd Digit detected(7)  
Jan 6 09:53:43.121: R2 Incoming Voice(2/15): DSX (E1 0:2):  
STATE:R2\_IN\_COLLECT\_DNIS R2  
**Got Event 7**  
*!--- Send digit 1 (pulse): Backward Signal Group A-1.* Jan 6 09:53:43.121:  
vtsp\_r2\_generate\_digits: vdev\_common=0x620BF390, string=567dc\_dial() vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 1#**  
Jan 6 09:53:43.121: dsp\_dtmf\_dialing: [0:1:2] packet\_Len=36 channel\_id=8516  
packet\_id=90 string=1# digits=2, time\_on=150, time\_off=30  
Jan 6 09:53:43.121: digit=', components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 6 09:53:43.121: digit=o, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
Jan 6 09:53:43.221: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=7,  
duration=8291dc\_digit  
Jan 6 09:53:43.221: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x621C5F3C) received digit (7)  
Jan 6 09:53:43.221: CSM voice (2/15): Rcvd Digit detected(7)  
Jan 6 09:53:43.221: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**  
Jan 6 09:53:43.489: vtsp\_process\_dsp\_message: MSG\_TX\_DIALING\_DONEdc\_dialing\_done()  
*!--- Timeout is 3 seconds.* Jan 6 09:53:46.121: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_TIMER**  
*!--- Digit 3 sent(pulse): Backward Signal Group A-3. !--- (Address-complete, changeover to  
reception of Group-B signals).* Jan 6 09:53:46.121: vtsp\_r2\_generate\_digits:  
vdev\_common=0x620BF390, string=567dc\_dial() vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string =  
3# Jan 6 09:53:46.121: dsp\_dtmf\_dialing: [0:1:2] packet\_Len=36 channel\_id=8516 packet\_id=90  
string=3# digits=2, time\_on=150, time\_off=30 Jan 6 09:53:46.121: digit=b, components=2,  
freq\_of\_first=1020, freq\_of\_second=900, amp\_of\_first=8192, amp\_of\_second=8192 Jan 6  
09:53:46.121: digit=o, components=2, freq\_of\_first=0, freq\_of\_second=0, amp\_of\_first=1,  
amp\_of\_second=1 *!--- Digit 1 is sent: Forward Signal Group II-1 !--- (subscriber without  
priority).* Jan 6 09:53:46.361: vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN:**  
**digit=1**, rtp\_timestamp=0x9330B42B dc\_digit\_up  
Jan 6 09:53:46.361: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x621C5F3C)  
received digit (1)  
Jan 6 09:53:46.361: CSM voice (2/15): Rcvd Digit detected(1)  
Jan 6 09:53:46.361: R2 Incoming Voice(2/15): DSX (E1 0:2):  
**STATE:R2\_IN\_CATEGORY R2**  
**Got Event 1**  
Jan 6 09:53:46.361: r2\_comp\_category:R2\_ALERTING  
*!--- Digit 6 sent (pulse): Backward Signal Group B-6 !--- (the subscriber line free of charge).*  
Jan 6 09:53:46.361: vtsp\_r2\_generate\_digits: vdev\_common=0x620BF390, string=567dc\_dial()  
vtsp\_dial\_nopush **dsp\_dtmf\_dialing(): dial\_string = 6#**  
Jan 6 09:53:46.361: dsp\_dtmf\_dialing: [0:1:2] packet\_Len=36 channel\_id=8516  
packet\_id=90 string=6# digits=2, time\_on=150, time\_off=30  
Jan 6 09:53:46.361: digit=e, components=2, freq\_of\_first=900,  
freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 6 09:53:46.361: digit=o, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
Jan 6 09:53:46.461: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF:digit=1,  
duration=8291dc\_digit  
Jan 6 09:53:46.461: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x621C5F3C)received digit (1)  
Jan 6 09:53:46.461: CSM voice (2/15): Rcvd Digit detected(1)  
Jan 6 09:53:46.461: R2 Incoming Voice(2/15): DSX (E1 0:2): STATE:R2\_IN\_COMPLETE R2

**Got Event R2\_TONE\_OFF**

Jan 6 09:53:46.729: vtsp\_process\_dsp\_message: MSG\_TX\_DIALING\_DONEdc\_dialing\_done()  
Jan 6 09:53:47.461: R2 Incoming Voice(2/15): DSX (E1 0:2):  
STATE:R2\_IN\_WAIT\_GUARD R2

**Got Event R2\_TONE\_TIMER**

Jan 6 09:53:47.461: R2\_IN\_IDLE:2 r2\_in\_connect called  
Jan 6 09:53:47.461: CSM\_PROC\_IC1\_COLLECT\_ADDR\_INFO: CSM\_EVENT\_ADDR\_INFO\_COLLECTED  
(DNIS=567, ANI=) at slot 2, port 15  
Jan 6 09:53:47.461: vtsp\_tsp\_call\_accept\_check (sdb=0x61B8F0E0,calling\_number=  
called\_number=567): peer\_tag=0  
Jan 6 09:53:47.461: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 09:53:47.461: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 09:53:47.461: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 09:53:47.461: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 09:53:47.461: VDEV\_ALLOCATE: failed to allocate a device  
Jan 6 09:53:47.461: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate a non-idle modem  
Jan 6 09:53:47.461: CSM\_PROC\_IC3\_WAIT\_FOR\_RES\_RESP: CSM\_EVENT\_RESOURCE\_OK at slot 2,  
port 15  
Jan 6 09:53:47.461: vtsp\_IC\_switch : (voice\_vdev= 0x620BF320)  
Jan 6 09:53:47.461: vtsp\_tsp\_call\_switch\_ind (cdb=0x621C5F3C,tsp\_info=0x620BF320,  
calling\_number= called\_number=567 redirect\_number=):  
peer\_tag=123dc\_switch: fsm\_pop()  
Jan 6 09:53:47.461: vtsp\_do\_call\_setup\_ind  
Jan 6 09:53:47.461: vtsp\_do\_call\_setup\_ind: Call ID=65677, guid=61FAF610  
Jan 6 09:53:47.461: vtsp\_do\_call\_setup\_ind: type=0, under\_spec=0, name=AB^Lo, id0=3,  
id1=0, id2=0, calling=123, called=567  
Jan 6 09:53:47.465: dsp\_cp\_tone\_off: [] packet\_Len=8 channel\_id=8516 packet\_id=71  
Jan 6 09:53:47.465: dsp\_idle\_mode: [] packet\_Len=8 channel\_id=8516 packet\_id=68  
Jan 6 09:53:47.465: dsp\_close\_voice\_channel: [] packet\_Len=8 channel\_id=8516  
packet\_id=75  
Jan 6 09:53:47.465: vtsp\_timer\_stop: 67189073  
Jan 6 09:53:47.465: csm\_vtsp\_call\_setup\_resp (vdev\_info=0x620BF320,  
vtsp\_cdb=0x621C5F3C)  
Jan 6 09:53:47.465: csm\_vtsp\_call\_setup\_resp:vdev\_common  
BP TS allocatedat BP\_stream0,  
BP\_Ch27  
Jan 6 09:53:47.465: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 7, chan 0,BP\_stream 0, BP\_ch 27  
Jan 6 09:53:47.465: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call. BP TS allocatedat  
stream 7, chan 0,BP\_stream 0, BP\_ch 27vtsp\_open\_voice\_and\_set\_params  
Jan 6 09:53:47.465: dsp\_close\_voice\_channel: [0:1 (52)] packet\_Len=8 channel\_id=8516  
packet\_id=75  
Jan 6 09:53:47.465: dsp\_open\_voice\_channel\_20: [0:1 (52)]  
packet\_Len=16 channel\_id=8516  
packet\_id=74 alaw\_ulaw\_select=1 associated\_signaling\_channel=0  
time\_slot=1 serial\_port=1  
Jan 6 09:53:47.465: dsp\_encap\_config\_20: [0:1 (52)] packet\_Len=24  
channel\_id=8516  
packet\_id=92 TransportProtocol 2 t\_ssrc=0x0 r\_ssrc=0x0 t\_vpxcc=0x0 r\_vpxcc=0x0  
Jan 6 09:53:47.465: dsp\_set\_playout: [0:1 (52)] packet\_Len=18 channel\_id=8516  
packet\_id=76 mode=1 initial=60 min=4 max=200 fax\_nom=300  
Jan 6 09:53:47.465: dsp\_echo\_canceller\_control: [0:1 (52)] packet\_Len=10  
channel\_id=8516  
packet\_id=66 flags=0x0  
Jan 6 09:53:47.465: dsp\_set\_gains: [0:1 (52)] packet\_Len=12 channel\_id=8516  
packet\_id=91 in\_gain=0 out\_gain=0  
Jan 6 09:53:47.465: dsp\_vad\_enable: [0:1 (52)] packet\_Len=10 channel\_id=8516  
packet\_id=78 thresh=-38act\_proceeding  
Jan 6 09:53:47.469: csm\_vtsp\_call\_proceeding:DST\_tdm\_chnl call. BP TS  
allocatedstream 7,  
chan 0,BP\_stream 0, BP\_ch 27act\_alert  
Jan 6 09:53:47.493: vtsp\_ring\_noan\_timer\_start: 67189076  
Jan 6 09:53:47.493: csm\_vtsp\_call\_alert (vtsp\_cdb=0x621C5F3C)  
act\_bridge act\_caps\_ind

```
Jan 6 09:53:47.737: act_caps_ind:Encap 1, Vad 2, Codec 0x4, CodecBytes 20,
FaxRate 2, FaxBytes 20 SignalType 0
DtmfRelay 1, Modem lact_caps_ack
Jan 6 09:53:47.737: dsp_idle_mode: [0:1 (52)] packet_Len=8 channel_id=8516
packet_id=68
Jan 6 09:53:47.737: act_caps_ack: codec = 15, ret = 1
Jan 6 09:53:47.737: dsp_cp_tone_off: [0:1 (52)] packet_Len=8 channel_id=8516
packet_id=71
Jan 6 09:53:47.737: dsp_idle_mode: [0:1 (52)] packet_Len=8 channel_id=8516
packet_id=68
Jan 6 09:53:47.737: dsp_encap_config_20: [0:1 (52)] packet_Len=24 channel_id=8516
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 09:53:47.737: dsp_voice_mode: [0:1 (52)] packet_Len=24 channel_id=8516
packet_id=73 coding_type=20 voice_field_size= 20 VAD_flag=1 echo_length=64
comfort_noise=1 inband_detect=1 digit_relay=2 AGC_flag=0act_alert_connect
Jan 6 09:53:49.461: vtsp_ring_noan_timer_stop: 67189273
Jan 6 09:53:49.461: dsp_cp_tone_off: [0:1 (52)] packet_Len=8 channel_id=8516
packet_id=71
Jan 6 09:53:49.461: csm_vtsp_call_connect (vtsp_cdb=0x621C5F3C,
voice_vdev=0x620BF320)
Jan 6 09:53:49.461: CSM_IC5_WAIT_FOR_SWITCH_OVER: CSM_EVENT_MODEM_OFFHOOK
at slot 2, port 15
Jan 6 09:53:49.617: CSM_RX_CAS_EVENT_FROM_NEAT:(0017): EVENT_CHANNEL_CONNECTED
at slot 2 and port 15
Jan 6 09:53:49.617: CSM_PROC_IC6_WAIT_FOR_CONNECT: CSM_EVENT_DSX0_CONNECTED
at slot 2, port 15
Jan 6 09:53:49.621: from NEAT(0): (0/2): TX ANSWERED(ABCD=0101)
eefje#
eefje#
```

## [R2 Digital Consumed ANI:567에 걸려오는 전화](#)

이 디버그 출력을 더 잘 이해하려면 [E1 R2 신호 이론을](#) 참조하십시오.

```
eefje#debug csm voice
Voice Call Switching Module debugging is on
eefje#debug cas
Channel Associated Signaling debugging is on
Jan 7 10:00:02.907: from NEAT(0): debug-cas is on
Jan 7 10:00:02.907: from NEAT(0): special debug-cas is offg vtsp all
Voice telephony call control all debugging is on
eefje#
eefje#
Jan 7 10:00:23.883: from NEAT(0): (0/8): Rx SEIZURE (ABCD=0001)
Jan 7 10:00:23.927: VDEV_ALLOCATE: failed to allocate a device
Jan 7 10:00:23.927: VDEV_ALLOCATE: 1/2 is allocated
Jan 7 10:00:23.927: csm_vtsp_init_tdm (voice_vdev=0x61F19688)
Jan 7 10:00:23.927: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 1,
dsprm 3, dsp 4,
dsp_channel 1
Jan 7 10:00:23.927: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 5,
channel 13,
bank 0, BP_channel 15, BP_stream 255
Jan 7 10:00:23.927: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0007):
EVENT_CALL_DIAL_IN at slot 1
and port 60
Jan 7 10:00:23.927: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT at slot 1, port 60
Jan 7 10:00:23.927: csm_vtsp_start_digit_collect (voice_vdev=0x61F19688)
Jan 7 10:00:23.927: Enter csm_connect_pri_vdev function
Jan 7 10:00:23.927: csm_connect_pri_vdev:tdm_allocate_BP_Ts() call. BP
TS allocated at BP_stream0, BP_Ch8,vdev_common 0x6205E5F8
Jan 7 10:00:23.927: to NEAT:(cid0007) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan8
```



```
Jan 7 10:00:23.927: vtsp_do_call_setup_ind
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: Call ID=65579, guid=62031A88
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: type=0, under_spec=0,
name=, id0=0, id1=0,id2=0, calling=, called=
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: redirect DN = reason =
  0vtsp_do_r2_start_digit(): fsm_push(vtsp_r2_state_table)

Jan 7 10:00:23.927: csm_vtsp_call_setup_resp (vdev_info=0x61F19688,
vtsp_cdb=0x61B5BFF8)
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:vdev_common
BP TS allocatedat BP_stream0,
  BP_Ch8
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream
  5, chan 13,BP_stream 255, BP_ch 15
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream
  5, chan 13,BP_stream 0, BP_ch 8
Jan 7 10:00:23.927: CSM_PROC_IC1_COLLECT_ADDR_INFO: CSM_EVENT_MODEM_OFFHOOK
(DNIS=, ANI=) at slot 1, port 60

Jan 7 10:00:23.931: R2 Incoming Voice(1/60): DSX (E1 0:8): STATE: R2_IN_IDLE
R2 Got Event R2_START
Jan 7 10:00:24.027: CSM_RX_CAS_EVENT_FROM_NEAT:(0007): EVENT_START_RX_TONE
at slot 1 and port 60
Jan 7 10:00:24.027: from NEAT(0): (0/8): TX SEIZURE ACK
(ABCD=1101)dc_init_dsp
  vtsp_open_voice_and_set_params
Jan 7 10:00:24.151: dsp_close_voice_channel: [0:1:8] packet_Len=8 channel_id=4929
  packet_id=75
Jan 7 10:00:24.151: dsp_open_voice_channel_20: [0:1:8] packet_Len=16
channel_id=4929
  packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=0 serial_port=0
Jan 7 10:00:24.151: dsp_encap_config_20: [0:1:8] packet_Len=24 channel_id=4929
  packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 7 10:00:24.151: dsp_set_payout: [0:1:8] packet_Len=18 channel_id=4929
  packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 7 10:00:24.151: dsp_echo_canceller_control: [0:1:8]
packet_Len=10 channel_id=4929
  packet_id=66 flags=0x0
Jan 7 10:00:24.151: dsp_set_gains: [0:1:8] packet_Len=12
channel_id=4929 packet_id=91
  in_gain=0 out_gain=0
Jan 7 10:00:24.151: dsp_vad_enable: [0:1:8] packet_Len=10
channel_id=4929 packet_id=78
  thresh=-38
Jan 7 10:00:24.151: dsp_voice_mode: [0:1:8] packet_Len=24
channel_id=4929 packet_id=73
  coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
comfort_noise=1
inband_detect=1 digit_relay=2 AGC_flag=0dsp_dtmf_mode
(VTSP_TONE_R2_MF_FORWARD_MODE)

Jan 7 10:00:24.151: dsp_dtmf_mode: [0:1:8] packet_Len=10 channel_id=4929
packet_id=65dtmf_or_mf=1
!--- Digit 5 is sent: Forward Signal Group I-5 (First DNIS digit). Jan 7 10:00:24.203:
vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_BEGIN: digit=5,
  rtp_timestamp=0x04030000 dc_digit_up
Jan 7 10:00:24.203: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)received digit (5)
Jan 7 10:00:24.203: CSM voice (1/60): Rcvd Digit detected(5)
Jan 7 10:00:24.203: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_PRE_CALLERID R2
Got Event 5
```

!--- Send Backward Signal Group A-5 (caller category request). Jan 7 10:00:24.203:  
vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial()vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 5**  
Jan 7 10:00:24.203: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929packet\_id=90  
string=5 digits=1, time\_on=65435, time\_off=30  
Jan 7 10:00:24.203: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 7 10:00:24.303: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF:digit=5,  
duration=30dc\_digit  
Jan 7 10:00:24.303: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (5)  
Jan 7 10:00:24.303: CSM voice (1/60): Rcvd Digit detected(5)  
Jan 7 10:00:24.303: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_CALLERID R2**  
**Got Event R2\_TONE\_OFF**

Jan 7 10:00:24.303: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()  
vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #  
Jan 7 10:00:24.303: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24 channel\_id=4929  
packet\_id=90 string=# digits=1, time\_on=150, time\_off=30  
Jan 7 10:00:24.303: digit=, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
**!--- Caller Category Forward Signal Group II-1 is sent.** Jan 7 10:00:24.403:  
vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=1,**  
rtp\_timestamp=0x001E0010 dc\_digit\_up  
Jan 7 10:00:24.403: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8)received  
digit (1)  
Jan 7 10:00:24.403: CSM voice (1/60): Rcvd Digit detected(1)  
Jan 7 10:00:24.403: R2 Incoming Voice(1/60): DSX (E1 0:8): **STATE:R2\_IN\_CALLERID R2**  
**Got Event 1**  
**!--- Send Backward Signal Group A-5 (Caller ID request).** Jan 7 10:00:24.403:  
vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial() vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 5**  
Jan 7 10:00:24.403: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=5 digits=1, time\_on=65435, time\_off=30  
Jan 7 10:00:24.403: digit=, components=2, freq\_of\_first=1020, freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 7 10:00:24.503: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=1,  
duration=30dc\_digit  
Jan 7 10:00:24.503: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (1)  
Jan 7 10:00:24.503: CSM voice (1/60): Rcvd Digit detected(1)  
Jan 7 10:00:24.503: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_CALLERID R2**  
**Got Event R2\_TONE\_OFF**

Jan 7 10:00:24.503: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()  
vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #  
Jan 7 10:00:24.503: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=# digits=1, time\_on=150, time\_off=30  
Jan 7 10:00:24.503: digit=, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
**!--- First ANI digit is sent: Forward Signal Group I-1.** Jan 7 10:00:24.603:  
vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN:**  
**digit=1,** rtp\_timestamp=0x001E0010 dc\_digit\_up  
Jan 7 10:00:24.603: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8) received digit (1)  
Jan 7 10:00:24.603: CSM voice (1/60): Rcvd Digit detected(1)  
Jan 7 10:00:24.603: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_CALLERID R2**  
**Got Event 1**  
**!--- Send Backward Signal Group A-5 (Caller ID request).** Jan 7 10:00:24.603:

vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial()vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 5**

Jan 7 10:00:24.603: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90

string=5 digits=1, time\_on=65435, time\_off=30

Jan 7 10:00:24.603: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192

Jan 7 10:00:24.703: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=1,  
duration=30dc\_digit

Jan 7 10:00:24.703: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (1)

Jan 7 10:00:24.703: CSM voice (1/60): Rcvd Digit detected(1)

Jan 7 10:00:24.703: R2 Incoming Voice(1/60): DSX (E1 0:8):

**STATE:R2\_IN\_CALLERID R2**

**Got Event R2\_TONE\_OFF**

Jan 7 10:00:24.703: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #

Jan 7 10:00:24.703: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90

string=# digits=1, time\_on=150, time\_off=30

Jan 7 10:00:24.703: digit=, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1

*!--- Second ANI digit is sent: Forward Signal Group I-2.* Jan 7 10:00:24.803:

vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN:digit=2,**  
rtp\_timestamp=0x001E0010 dc\_digit\_up

Jan 7 10:00:24.803: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8)  
received digit (2)

Jan 7 10:00:24.803: CSM voice (1/60): Rcvd Digit detected(2)

Jan 7 10:00:24.803: R2 Incoming Voice(1/60): DSX (E1 0:8):

**STATE:R2\_IN\_CALLERID R2**

**Got Event 2**

*!--- Send Backward Signal Group A-5 (Caller ID request).* Jan 7 10:00:24.803:

vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial()vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 5**

Jan 7 10:00:24.803: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929packet\_id=90

string=5 digits=1, time\_on=65435, time\_off=30

Jan 7 10:00:24.803: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192

Jan 7 10:00:24.903: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=2,  
duration=30dc\_digit

Jan 7 10:00:24.903: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (2)

Jan 7 10:00:24.903: CSM voice (1/60): Rcvd Digit detected(2)

Jan 7 10:00:24.903: R2 Incoming Voice(1/60): DSX (E1 0:8):

**STATE:R2\_IN\_CALLERID**

**R2 Got Event R2\_TONE\_OFF**

Jan 7 10:00:24.903: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #

Jan 7 10:00:24.903: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90

string=# digits=1, time\_on=150, time\_off=30

Jan 7 10:00:24.903: digit=, components=2, freq\_of\_first=0,  
freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1

*!--- Third ANI digit is sent: Forward Signal Group I-3.* Jan 7 10:00:25.003:

vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=3,**  
rtp\_timestamp=0x001E0010 dc\_digit\_up

Jan 7 10:00:25.003: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8)  
received digit (3)

Jan 7 10:00:25.003: CSM voice (1/60): Rcvd Digit detected(3)

Jan 7 10:00:25.003: R2 Incoming Voice(1/60): DSX (E1 0:8):

**STATE:R2\_IN\_CALLERID R2**

**Got Event 3**

*!--- Send Backward Signal Group A-5 (Caller ID request).* Jan 7 10:00:25.003:  
vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial()vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 5**

Jan 7 10:00:25.003: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=5 digits=1, time\_on=65435, time\_off=30  
Jan 7 10:00:25.003: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=780,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 7 10:00:25.103: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF:digit=3,  
duration=30dc\_digit  
Jan 7 10:00:25.103: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (3)  
Jan 7 10:00:25.103: CSM voice (1/60): Rcvd Digit detected(3)  
Jan 7 10:00:25.103: R2 Incoming Voice(1/60): DSX (E1 0:8):

**STATE:R2\_IN\_CALLERID R2**

**Got Event R2\_TONE\_OFF**

Jan 7 10:00:25.103: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #  
Jan 7 10:00:25.103: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=# digits=1, time\_on=150, time\_off=30  
Jan 7 10:00:25.103: digit=, components=2, freq\_of\_first=0,  
freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
*!--- Digit 15 is sent: Forward Signal Group I-15 (end of ANI digit).* Jan 7 10:00:25.203:  
vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=15, rtp\_timestamp=0x001E0010  
dc\_digit\_up Jan 7 10:00:25.203: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8) received digit (\*)  
Jan 7 10:00:25.203: CSM voice (1/60): Rcvd Digit detected(\*) Jan 7 10:00:25.203: R2 Incoming  
Voice(1/60): DSX (E1 0:8): **STATE:R2\_IN\_CALLERID R2**

**Got Event 15**

*!--- Send Backward Signal Group A-1 (next DNIS digit).* Jan 7 10:00:25.203:  
vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8, string=5dc\_dial()vtsp\_dial\_nopush  
**dsp\_dtmf\_dialing(): dial\_string = 1**  
Jan 7 10:00:25.203: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=1 digits=1, time\_on=65435, time\_off=30  
Jan 7 10:00:25.203: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 7 10:00:25.303: vtsp\_process\_dsp\_message:  
MSG\_TX\_DTMF\_DIGIT\_OFF: digit=15, duration=30dc\_digit Jan 7 10:00:25.303: csm\_vtsp\_digit\_ready  
(vtsp\_cdb=0x61B5BFF8) received digit (\*) Jan 7 10:00:25.303: CSM voice (1/60): Rcvd Digit  
detected(\*) Jan 7 10:00:25.303: R2 Incoming Voice(1/60): DSX (E1 0:8): **STATE:R2\_IN\_COLLECT\_DNIS  
R2**

**Got Event R2\_TONE\_OFF**

Jan 7 10:00:25.303: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=5dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #  
Jan 7 10:00:25.303: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24 channel\_id=4929  
packet\_id=90 string=# digits=1, time\_on=150, time\_off=30  
Jan 7 10:00:25.303: digit=, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
*!--- Second DNIS digit is sent: Forward Signal Group I-6.* Jan 7 10:00:25.391:  
vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=6,**  
rtp\_timestamp=0x001E0010 dc\_digit\_up  
Jan 7 10:00:25.391: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8)  
received digit (6)  
Jan 7 10:00:25.391: CSM voice (1/60): Rcvd Digit detected(6)  
Jan 7 10:00:25.391: R2 Incoming Voice(1/60): DSX (E1 0:8):  
STATE:R2\_IN\_COLLECT\_DNIS  
**R2 Got Event 6**  
*!--- Send Backward Signal Group A-1.* Jan 7 10:00:25.391: vtsp\_r2\_generate\_digits:

vdev\_common=0x6205E5F8, string=56dc\_dial() vtsp\_dial\_nopush **dsp\_dtmf\_dialing(): dial\_string = 1**

Jan 7 10:00:25.391: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=1 digits=1, time\_on=65435, time\_off=30

Jan 7 10:00:25.391: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192

Jan 7 10:00:25.491: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF:digit=6,  
duration=30dc\_digit

Jan 7 10:00:25.491: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8) received digit (6)

Jan 7 10:00:25.491: CSM voice (1/60): Rcvd Digit detected(6)

Jan 7 10:00:25.491: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE: R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**

Jan 7 10:00:25.491: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=56dc\_dial() vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #

Jan 7 10:00:25.491: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=# digits=1, time\_on=150, time\_off=30

Jan 7 10:00:25.491: digit=, components=2, freq\_of\_first=0,  
freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1

*!--- Third DNIS digit is sent: Forward Signal Group I-7.* Jan 7 10:00:25.583:  
vtsp\_process\_dsp\_message: **MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=7,**  
rtp\_timestamp=0x001E0010 dc\_digit\_up

Jan 7 10:00:25.583: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8)  
received digit (7)

Jan 7 10:00:25.583: CSM voice (1/60): Rcvd Digit detected(7)

Jan 7 10:00:25.583: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event 7**

*!--- Send Backward Signal Group A-1.* Jan 7 10:00:25.583: vtsp\_r2\_generate\_digits:  
vdev\_common=0x6205E5F8, string=567dc\_dial()vtsp\_dial\_nopush **dsp\_dtmf\_dialing(): dial\_string = 1**

Jan 7 10:00:25.583: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=1 digits=1, time\_on=65435, time\_off=30

Jan 7 10:00:25.583: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=1140,  
amp\_of\_first=8192, amp\_of\_second=8192

Jan 7 10:00:25.683: vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_OFF: digit=7,  
duration=30dc\_digit

Jan 7 10:00:25.683: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8)  
received digit (7)

Jan 7 10:00:25.683: CSM voice (1/60): Rcvd Digit detected(7)

Jan 7 10:00:25.683: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_OFF**

Jan 7 10:00:25.683: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=567dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #

Jan 7 10:00:25.683: dsp\_dtmf\_dialing: [0:1:8] packet\_Len=24  
channel\_id=4929 packet\_id=90  
string=# digits=1, time\_on=150, time\_off=30

Jan 7 10:00:25.683: digit=, components=2, freq\_of\_first=0,  
freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1

Jan 7 10:00:25.835: vtsp\_process\_dsp\_message: MSG\_TX\_DIALING\_DONEdc\_dialing\_done()  
*!--- Timeout is 3 seconds.* Jan 7 10:00:28.583: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE:R2\_IN\_COLLECT\_DNIS R2**  
**Got Event R2\_TONE\_TIMER**

*!--- Send Backward Signal Group A-3: address-complete, changeover !--- to reception of group-B signal.* Jan 7 10:00:28.583: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=567dc\_dial()vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = 3# Jan 7 10:00:28.583:

**dsp\_dtmf\_dialing: [0:1:8] packet\_Len=36**  
**channel\_id=4929 packet\_id=90**  
string=3# digits=2, time\_on=150, time\_off=30  
Jan 7 10:00:28.583: digit=, components=2, freq\_of\_first=1020,  
freq\_of\_second=900,  
amp\_of\_first=8192, amp\_of\_second=8192  
Jan 7 10:00:28.583: digit=, components=2, freq\_of\_first=0, freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=1  
*!--- Forward Signal Group II-1 is sent: subscriber without priority.* Jan 7 10:00:28.831:  
vtsp\_process\_dsp\_message: MSG\_TX\_DTMF\_DIGIT\_BEGIN: digit=1, rtp\_timestamp=0x001E0003 dc\_digit\_up  
Jan 7 10:00:28.831: csm\_vtsp\_digit\_ready\_up (vtsp\_cdb=0x61B5BFF8) received digit (1) Jan 7  
10:00:28.831: CSM voice (1/60): Rcvd Digit detected(1) Jan 7 10:00:28.831: R2 Incoming  
Voice(1/60): DSX (E1 0:8): STATE:R2\_IN\_CATEGORY R2 **Got Event 1**  
Jan 7 10:00:28.831: CSM\_PROC\_IC1\_COLLECT\_ADDR\_INFO:  
CSM\_EVENT\_ADDR\_INFO\_COLLECTED  
(DNIS=567, ANI=123) at slot 1, port 60  
Jan 7 10:00:28.831: vtsp\_tsp\_call\_accept\_check (sdb=0x61DADEE0,  
calling\_number=123  
called\_number=567): peer\_tag=0  
Jan 7 10:00:28.835: VDEV\_ALLOCATE: failed to allocate a device  
Jan 7 10:00:28.835: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate  
a non-idle modem  
Jan 7 10:00:28.835: VDEV\_ALLOCATE: failed to allocate a device  
Jan 7 10:00:28.835: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate  
a non-idle modem  
Jan 7 10:00:28.835: VDEV\_ALLOCATE: failed to allocate a device  
Jan 7 10:00:28.835: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate  
a non-idle modem  
Jan 7 10:00:28.835: VDEV\_ALLOCATE: failed to allocate a device  
Jan 7 10:00:28.835: VDEV\_ALLOCATE\_ALMOST\_READY: failed to allocate  
a non-idle modem  
Jan 7 10:00:28.835: CSM\_PROC\_IC3\_WAIT\_FOR\_RES\_RESP: CSM\_EVENT\_RESOURCE\_OK  
at slot 1,  
port 60  
Jan 7 10:00:28.835: vtsp\_IC\_switch : (voice\_vdev= 0x61F19688)  
Jan 7 10:00:28.835: vtsp\_tsp\_call\_switch\_ind (cdb=0x61B5BFF8,  
tsp\_info=0x61F19688,  
calling\_number=123 called\_number=567 redirect\_number=):  
peer\_tag=123dc\_switch: fsm\_pop()  
Jan 7 10:00:28.835: vtsp\_do\_call\_setup\_ind  
Jan 7 10:00:28.835: vtsp\_do\_call\_setup\_ind: Call ID=65581,  
guid=62031A88  
Jan 7 10:00:28.835: vtsp\_do\_call\_setup\_ind: type=0, under\_spec=0,  
name=b`, id0=9,  
id1=0, id2=0, calling=123, called=567  
Jan 7 10:00:28.835: dsp\_cp\_tone\_off: [] packet\_Len=8 channel\_id=4929  
packet\_id=71  
Jan 7 10:00:28.835: dsp\_idle\_mode: [] packet\_Len=8 channel\_id=4929  
packet\_id=68  
Jan 7 10:00:28.835: dsp\_close\_voice\_channel: [] packet\_Len=8  
channel\_id=4929 packet\_id=75  
Jan 7 10:00:28.835: vtsp\_timer\_stop: 7063006  
Jan 7 10:00:28.839: csm\_vtsp\_call\_setup\_resp (vdev\_info=0x61F19688,  
vtsp\_cdb=0x61B5BFF8)  
Jan 7 10:00:28.839: csm\_vtsp\_call\_setup\_resp:vdev\_common BP TS  
allocatedat BP\_stream0,  
BP\_Ch8  
Jan 7 10:00:28.839: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call.  
BP TS allocatedat stream 5, chan 13,BP\_stream 0, BP\_ch 8  
Jan 7 10:00:28.839: csm\_vtsp\_call\_setup\_resp:DST\_tdm\_chnl call.  
BP TS allocatedat stream 5, chan 13,BP\_stream 0, BP\_ch  
8vtsp\_open\_voice\_and\_set\_params  
Jan 7 10:00:28.839: dsp\_close\_voice\_channel: [0:1 (17)]  
packet\_Len=8 channel\_id=4929  
packet\_id=75  
Jan 7 10:00:28.839: dsp\_open\_voice\_channel\_20: [0:1 (17)] packet\_Len=16  
channel\_id=4929

```

packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=0 serial_port=0
Jan 7 10:00:28.839: dsp_encap_config_20: [0:1 (17)] packet_Len=24
channel_id=4929
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0t_vpxcc=0x0
r_vpxcc=0x0
Jan 7 10:00:28.839: dsp_set_payout: [0:1 (17)] packet_Len=18
channel_id=4929 packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 7 10:00:28.839: dsp_echo_canceller_control: [0:1 (17)]
packet_Len=10 channel_id=4929
packet_id=66 flags=0x0
Jan 7 10:00:28.839: dsp_set_gains: [0:1 (17)] packet_Len=12
channel_id=4929 packet_id=91
in_gain=0 out_gain=0
Jan 7 10:00:28.839: dsp_vad_enable: [0:1 (17)] packet_Len=10
channel_id=4929 packet_id=78
thresh=-38act_proceeding
Jan 7 10:00:28.839: csm_vtsp_call_proceeding:DST_tdm_chnl call.
BP TS allocatedstream 5,
chan 13,BP_stream 0, BP_ch 8act_alert
Jan 7 10:00:28.867: vtsp_ring_noan_timer_start: 7063009
Jan 7 10:00:28.867: csm_vtsp_call_alert (vtsp_cdb=0x61B5BFF8)
Jan 7 10:00:28.867: csm_vtsp_call_alert: CSM_EVENT_ALERTING_RECEIVED
Jan 7 10:00:28.867: CSM_IC5_WAIT_FOR_SWITCH_OVER: at slot 1, port 60
Jan 7 10:00:28.867: CSM_EVENT_ALERTING_RECEIVED:
Jan 7 10:00:28.867: calling alerting_start_event
!--- Note: For modems, Backward Signal !--- Group B-6 (subscriber's line free, charge) !--- is
sent immediately. !--- For voice, it is delayed until alerting is received. !--- Notice that
"R2_REJECT" is printed instead of R2_ALERTING. !--- This printing issue is solved in Cisco IOS
Software Release 12.1T.

Jan 7 10:00:28.867: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2 IN IDLE R2
Got Event R2_REJECT
Jan 7 10:00:28.867: R2_ALERTING: r2_comp_idle
Jan 7 10:00:28.867: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=567act_bridge
Jan 7 10:00:28.867: dsp_voice_mode: [0:1 (17)] packet_Len=24
channel_id=4929 packet_id=73
coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
comfort_noise=1
inband_detect=1 digit_relay=2 AGC_flag=0dsp_dtmf_mode
(VTSP_TONE_R2_MF_FORWARD_MODE)
!--- Answer signal (B-6) is sent after alerting is received. !--- Send Backward Signal Group B6
signal (Subscriber's line free, charge). Jan 7 10:00:28.871: dsp_dtmf_mode: [0:1 (17)]
packet_Len=10 channel_id=4929 packet_id=65 dtmf_or_mf=1vtsp_r2_dial vtsp_r2_dial():
fsm_push(vtsp_r2_state_table) dsp_dtmf_dialing(): dial_string = 6

Jan 7 10:00:28.871: dsp_dtmf_dialing: [0:1 (17)] packet_Len=24
channel_id=4929
packet_id=90 string=6 digits=1, time_on=65435, time_off=30
Jan 7 10:00:28.871: digit=, components=2, freq_of_first=900,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:28.923: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_BEGIN: digit=1,
rtp_timestamp=0x001E0006 dc_digit_up
Jan 7 10:00:28.923: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (1)
Jan 7 10:00:28.923: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:28.923: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE: R2_IN_COMPLETE
R2 Got Event 1
Jan 7 10:00:28.971: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=1,
duration=30dc_digit

```

Jan 7 10:00:28.971: csm\_vtsp\_digit\_ready (vtsp\_cdb=0x61B5BFF8)  
received digit (1)  
Jan 7 10:00:28.971: CSM voice (1/60): Rcvd Digit detected(1)  
Jan 7 10:00:28.971: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE: R2\_IN\_COMPLETE R2**  
**Got Event R2\_TONE\_OFF**  
Jan 7 10:00:28.971: vtsp\_r2\_generate\_digits: vdev\_common=0x6205E5F8,  
string=567dc\_dial()  
vtsp\_dial\_nopush dsp\_dtmf\_dialing(): dial\_string = #  
Jan 7 10:00:28.971: dsp\_dtmf\_dialing: [0:1 (17)] packet\_Len=24  
channel\_id=4929  
packet\_id=90 string=# digits=1, time\_on=150, time\_off=30  
Jan 7 10:00:28.975: digit=, components=2, freq\_of\_first=0,  
freq\_of\_second=0,  
amp\_of\_first=1, amp\_of\_second=lds\_dialing\_defaultlds\_dialing\_default  
Jan 7 10:00:29.127: vtsp\_process\_dsp\_message:  
MSG\_TX\_DIALING\_DONEdc\_dialing\_done()  
Jan 7 10:00:29.971: R2 Incoming Voice(1/60): DSX (E1 0:8):  
**STATE: R2\_IN\_WAIT\_GUARD R2**  
**Got Event R2\_TONE\_TIMER**  
Jan 7 10:00:29.971: R2\_IN\_IDLE:2 r2\_in\_connect called  
Jan 7 10:00:29.971: R2\_IN\_CONNECT: call end dial  
Jan 7 10:00:29.971: pop the dial state machine  
Jan 7 10:00:29.971: vtsp\_r2\_end\_dial: vdev\_common=0x6205E5F8,  
string=567ds\_end\_dial():  
fsm\_pop() act\_caps\_ind  
Jan 7 10:00:29.971: act\_caps\_ind:Encap 1, Vad 2, Codec 0x4,  
CodecBytes 20, FaxRate 2,  
FaxBytes 20 SignalType 0 DtmfRelay 1, Modem lact\_caps\_ack  
Jan 7 10:00:29.971: dsp\_idle\_mode: [0:1 (17)] packet\_Len=8  
channel\_id=4929 packet\_id=68  
Jan 7 10:00:29.971: act\_caps\_ack: codec = 15, ret = 1  
Jan 7 10:00:29.971: dsp\_cp\_tone\_off: [0:1 (17)] packet\_Len=8  
channel\_id=4929 packet\_id=71  
Jan 7 10:00:29.971: dsp\_idle\_mode: [0:1 (17)] packet\_Len=8  
channel\_id=4929 packet\_id=68  
Jan 7 10:00:29.971: dsp\_encap\_config\_20: [0:1 (17)] packet\_Len=24  
channel\_id=4929  
packet\_id=92 TransportProtocol 2 t\_ssrc=0x0 r\_ssrc=0x0 t\_vpxcc=0x0  
r\_vpxcc=0x0  
Jan 7 10:00:29.971: dsp\_voice\_mode: [0:1 (17)] packet\_Len=24  
channel\_id=4929 packet\_id=73  
coding\_type=19 voice\_field\_size=20 VAD\_flag=1 echo\_length=64  
comfort\_noise=1  
inband\_detect=1 digit\_relay=2 AGC\_flag=0act\_alert\_connect  
Jan 7 10:00:30.255: vtsp\_ring\_noan\_timer\_stop: 7063148  
Jan 7 10:00:30.255: dsp\_cp\_tone\_off: [0:1 (17)] packet\_Len=8  
channel\_id=4929 packet\_id=71  
Jan 7 10:00:30.255: csm\_vtsp\_call\_connect (vtsp\_cdb=0x61B5BFF8,  
voice\_vdev=0x61F19688)  
Jan 7 10:00:30.255: CSM\_IC5\_WAIT\_FOR\_SWITCH\_OVER:  
CSM\_EVENT\_MODEM\_OFFHOOK at slot 1,  
port 60  
Jan 7 10:00:30.607: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(0007):  
EVENT\_CHANNEL\_CONNECTED at slot 1  
and port 60  
Jan 7 10:00:30.607: CSM\_PROC\_IC6\_WAIT\_FOR\_CONNECT:  
CSM\_EVENT\_DSX0\_CONNECTED at slot 1,  
port 60  
Jan 7 10:00:30.607: from NEAT(0): (0/8): **TX ANSWERED** (ABCD=0101)  
eefje#

## [관련 정보](#)



- [Cisco AS5300 Access Server의 Voice over IP에 대한 E1 R2 신호](#)
- [Cisco 3620 및 3640 Series 라우터의 E1 R2 신호](#)
- [cas-custom 명령으로 E1 R2 사용자 지정](#)
- [E1 R2 및 채널 관련 신호 구성](#)
- [Cisco AS5300 및 Cisco AS5200 Access Server의 E1 R2 신호](#)
- [음성 기술 지원](#)
- [음성 및 통합 커뮤니케이션 제품 지원](#)
- [Cisco IP 텔레포니 문제 해결](#)
- [기술 지원 및 문서 - Cisco Systems](#)