V5.2 C	riginate	ed and V	5.2 Terminated	d Call (V5.2	to V5.2 Call DTM	F, Called Subso	criber G	oes Onhook))							· · · · · · · · · · · · · · · · · · ·
subscri 1	ber ac netv	ccess work 1					switchi	ng system						access network 2	subscriber 2	EventHelix.com/EventStudio 1.5
sub 1	v52	AN 1			call handler 1		C	entral process	sor		call ha	ndler 2		v52 AN 2	sub 2	
sub 1	v52	AN 1	dsp 1 to man	ager 1 mana	all v52 call 1 ager 1 allo	E1 time sl ocator 1 allocato	lot rom or 1 ma	uting space nager allo	e slot t cator mai	tone time nager 2 alloc	e slot E ator 2 alloca	1 v52 call 2 ator 2	call nanager 2	v52 AN 2	sub 2	30-May-02 23:11 (Page 1)
			I			Comu	right (a)	2002 Event	Jalix com I	Ing. All Dight	a Deserved					
							fight (c)			IIIC. All Kigili	s Keselveu.					
							V	/5.2 calling si	ubscriber g	goes offhook						
-	offhook		establish													V5.2 calling subscriber offhook indication received in the access network V5.2 calling subscriber offhook indication received by the
			offhook													switching system in establish message
				Callir	ng Port											Resource, calling port is allocated for the call
																Call manager creates originating V5.2 call object to handle the call
					Idle	>										The initial state of V5.2 call is set to idle
					establish offhook											V5.2 calling subscriber offhook indication is passed to V5.2 call in establish message
			establ	ish_ack	Allocating Slot for											Establish ack is sent to the V5.2 access network
					Originating resource_all	> ocate										Request for E1 Slot towards calling subscriber is sent LEG: E1 slot available for
					a E1 Slot tr Su resource_alloc	llocate owards Calling bscriber ate_ack										V5.2 Subscriber Resource E1 Slot is allocated towards V5.2 calling subscriber
			allo	cation												E1 and timeslot allocation is passed to the V5.2 access network. The allocation message is used for this purpose
					tallocation_comp											V5.2 call awaits allocation complete message from access network
			allocati	on_comp	tallocation_comp											Allocation complete is received
		1		· · · · · · · · · · · · · · · · · · ·	oice path is established	ed between the si	ubscriber	r and the swit	tch. Now th	he switch pre	pares for coll	ecting digits from	he subscri	ber.	<u> </u>	
			_ re	source_alloc	ate											LEG: DTMF Dialling Subscriber DTMF receiver needs to be configured to receive DTMF digits dialled by the subscriber. Send resource request to DTMF receiver for digit
		D	allocate TMF Receiver													соцестоя

V5.2 Orig	ginated and V	V5.2 Terminated	Call (V5.2	to V5.2	Call D	DTMF, Call	ed Subscrib	oer Goe	s Onhool	s)										
subscriber 1	subscriber access switching system access su 1 network 1 network 2													subscriber 2	EventHelix.com/EventStudio 1.5					
sub 1	v52 AN 1		(call handl	er 1			cent	tral proce	ssor			call ha	andler	2		v52	AN 2	sub 2	
sub 1	v52 AN 1	dsp 1 to mana	ne ca ager 1 mana	all v5 ager 1	52 call 1	E1 allocator 1	time slot allocator 1	routi mana	ng spa ger allo	ce slot ocator	ton manag	e time ger 2 alloca	slot H ator 2 alloc	E1 cator 2	v52 call 2	call manager 2	v52	AN 2	sub 2	30-May-02 23:11 (Page 2)
		resou	rce_allocate	ack	•				<u> </u>	-							-			Resource, DTMF receiver is allocated for the originating V5.2 call
		be Feed D	switch, o	Feedi face dial_tone	ing Dial tor															Request to switch dial tone towards V5.2 calling subscriber
	Dial_'	Tone																		Dial tone feed is passed directly to the subscriber via the voice path
	Dial tone is being fed to the V5.2 calling subscriber																			
				ti	dt															LEG: Complete Dialling Originating V5.2 call awaits digits by starting IDT timer (Inter Digit Timer)
								V5.2	2 calling s	ubscribe	er dials	first digit								
	igit dig	_Tone	signal digit unswitch, ad ial tone switch, sil	fface dial_tone fface ence_tone	→ 		Siler	ice tone	is being f	fed to th	e V5.2	calling sub	oscriber							DTMF digit dialled by V5.2 calling subscriber received Stop dial tone towards V5.2 calling subscriber Switch silence tone towards V5.2 calling subscriber Silence tone feed is passed directly to the subscriber via the voice path
				tio tio	dt dt															Stop IDT timer upon receipt of dialled digit Start IDT timer to await receipt of next digit
			-					V5.2	calling s	ubscribe	er dials	next digit								
di	igit dig	<u>, it</u>	signal digit		→ dt dt															Next digit dialled by V5.2 calling subscriber received
			signal digit	tio	→ dt															Next digit dialled by V5.2 calling subscriber received End of dialling detected by originating V5.2 call

V5.2 Ori	iginated an	d V5.2 Terminate	ed Call (V5.2	to V5.2 C	all DTN	MF, Call	ed Subso	criber G	oes Onho	ok)											
subscribe	access network	1						switchi	ing system									acces: network	$\begin{bmatrix} s \\ c \\ 2 \end{bmatrix}$	subscriber 2	EventHelix.com/EventStudio 1.5
sub 1	v52 AN	1	(call handler	r 1			c	entral proc	essor			call	handler	r 2			v52 AN	12	sub 2	
sub 1	v52 AN	1 dsp 1 t mar	tone ca nager 1 mana	all v52 ager 1	call 1 al	E1 locator 1	time sl allocato	lot ro or 1 ma	uting sp anager a	ace slot locator	t to: mana	ne tir .ger 2 allo	ne slot cator 2 allo	E1 ocator 2	v52 call 2	cal manag	ll ger 2	v52 AN	12	sub 2	30-May-02 23:11 (Page 3)
		· · ·	resource_fre	e	-		•				•	!									Release the DTMF receiver
		free DTMF Receiver	inter switch, ro outing tone	Alloca rface uting_tone	ating Path	>															Switch routing tone towards V5.2 calling subscriber
-	Rout	ing_Tone																			Routing tone feed is passed directly to the subscriber via the voice path
								Routing	tone is bei	ng fed t	o V5.2	calling su	oscriber								
						res	source_a	llocate	interfec	•											Send resource request for space slot
									routing	c											can routing being performed
										allocate											LEG: Routing is successful Call to be terminated in this exchange detected; EntityID for called directory number determined
						resou	urce_allo interfa switch	ocate_acl	k												Resource Response containing t-s-t resources for call received Switch the path for call
							-	int s	erface witch	_											Perform t-s switching for call
				Awaiti	ing Called	>			Sv	begin vitch Path	inter swi	face tch									Perform s-t switching for call
										call_	request										Send call request to terminating call handler
																					LEG: Called Subscriber is free
																Called	Port				Resource, called port is allocated for the call
														<	Idle						Call manager creates terminating V5.2 call object to handle the call
									call_1	equest_	ack_				Allocating Slot	or					Indicate that called subscriber is free
			unswitch, r	rface outing_tone	-																Stop routing tone towards V5.2 calling subscriber







V5.2 Orig	inated and `	V5.2 Terminate	d Call (V5.2	to V5.2 C	all DTN	IF, Called S	ubscrib	er Goes C)nhook)	1											
subscriber	access network 1						sw	itching sy	stem									acces: networl	s subsc	criber	EventHelix.com/EventStudio 1.5
sub 1	v52 AN 1			call handler	1			centra	l process	sor			call	handler 2	2		,	v52 AN	2 sul	b 2	
sub 1	v52 AN 1	dsp 1 t	one c	all v52	call 1	E1 tin	ne slot	routing	space	e slot	tone	time	slot	E1	v52 c	call 2 ca	11	v52 AN	2 sul	b 2	30-May-02 23:11 (Page 7)
		man	ager I mana	ager I	all	ocator I allo	cator 1	manager	r alloc	cator	manager 2	allocat	tor 2 allo	ocator 2		mana	ger 2				
		b Feed Pa	egin arking tone																		
	Parking	Tone																			Parking tone feed is passed
-			1																		directly to the subscriber via
																					the voice path
				1	1		Parki	ng tone is	being fe	ed to th	ie V5.2 call	ing sub	scriber								
																deallo	cation	_			Terminating V5.2 call handler
																					sends E1 timeslot release
																					deallocation message
														tdeallo	cation	_comp					Terminating V5.2 call handler
																					awaits deallocation complete
																deallocati	on con	np			Indicate E1 timeslot freed
															ŀ	<	on_con				towards V5.2 called subscriber
																					in deallocation complete
														tdeallor	cation	comn					message
														resourc	∢ re_free						Send E1 slot resource release
															<u></u>						request
														free							
													EI Slot t Su	owards Ca bscriber	lled						
														\sim	Abor	ting					
																discor	nnect				Terminating V5.2 call handler
															Γ						sends disconnect message to
														tdiscor	nnect	comp					Terminating V5.2 call handler
														ſ		comp					awaits disconnect complete
																					network
																disconne	ct com	n			Disconnect complete message
															ŀ	<	<u>et_eom</u>	<u>P</u>			is received from the access
																					network
														tdiscor	nnect	comp					
															ŀ	call_over					Send call over indication for the terminating V5.2 call
																					handler to terminating call
																					manager
																delete					
															X	<					Call manager deletes
																					terminating V5.2 call object
																fre	ee I Port				
					<u> </u>	The terminati	ng V5 2	subscribe	er nort is	free f	or another	originati	ing or ter	minating	z call	Carleo	oit]
L							₅ v J.2		er port is			Jinginat	115 01 101		Scan						
onh	nook																				
					1		Callin	g Subscrib	ber goes	onhoo	k on hearin	ng Parki	ng tone								
		si	gnal																		V5.2 calling subscriber onhook
		or	nhook																		indication is received from the
																					message
																					-
		I	1			1	I													I	

V5.2 Orig	ginated and	d V5.2 Terminated Call (V5.2	2 to V5.2 Call DTMF,	Called Subscrib	oer Goes On	hook)							
subscriber 1	access network	1		SV	vitching syste	em			11		access network 2	subscriber 2	EventHelix.com/EventStudio 1.5
sub I	v52 AN		call handler I	1 1 2 1 4	central p	rocessor		call h	andler 2	11	v52 AN 2	sub 2	
sub I	v52 AN	dsp 1 tone c manager 1 man	ager 1 v52 call 1 E alloca	ator 1 allocator 1	routing manager	space slot allocator	tone manager 2	allocator 2 allo	cator 2	call manager 2	v52 AN 2	sub 2	30-May-02 23:11 (Page 8)
	•	signal_ack											Signal ack message is sent to the V5.2 access network
		unswitch, j	erface parking_tone										Stop Parking tone towards V5.2 calling subscriber
		end Feed Parking tone											
		deallocation	Clearing										Originating V5.2 call handler
													sends deallocation message to indicate E1 slot release indication to access network
			tdeallocation_comp										Originating V5.2 call object awaits deallocation complete message
		deallocation_comp											Indicate E1 timeslot freed towards V5.2 calling subscriber in deallocation complete message
			tdeallocation_comp resource_free	ee l									Send E1 slot release request
			E1 Slot tow. Subsc	ards Calling criber									
	•	disconnect											Originating V5.2 call object sends disconnect message to access network
			tdisconnect_comp										Originating V5.2 call object awaits disconnect complete message
		disconnect_comp											Disconnect complete message is received from V5.2 access network
			tdisconnect_comp call_over										Send call over indication for originating V5.2 call to
			delete										originating call manager
			X										Call manager deletes originating V5.2 call object
		f Calli	ng Port										
			Th	e originating V5.	2 subscriber p	oort is free f	or another or	iginating or tern	ninating call				