ANNEX A

(to Recommendation Q.764)

Timers used in Recommendation Q.764 (Sheet 1 of 6)

Symbol

Time–out value

Significance

Cause for initiation

Normal termination

At the first expiry

At the following expiry

T1

4–15 s

Local

When release message is sent

At the receipt of release complete message

Retransmit release message and reinitialize timer T1

Same as the first expiry

T2

3 min

Dual

When controlling exchange receives suspend (user) message

At the receipt of resume (user) message at controlling exchange

Initiate release procedure

–

T3

3 min

Dual

When local exchange sends delayed release message

When hold condition is removed

Initiate release procedure

–

T4

4–15 s

Dual

When local exchange sends call modification request message

At the reception call modification complete message

–

T5

1 min

Local

When initial release message is sent

At receipt of release complete message

Send reset circuit message, alert maintenance personnel, and remove the circuit from service

The sending of the de reset circuit message should continue at 1–min intervals until maintenance intervention occurs

T6

Covered in Q.118

Dual

When controlling exchange receives suspend (network)

At the receipt of resume (network) message

Initiate release procedure

–

Timers used in Recommendation Q.764 (Sheet 2 of 6)

Symbol

Time–out value

Significance

Cause for initiation

Normal termination

At the first expiry

At the following expiry

T7

20–30 s

Dual

When the latest address message is sent

When the condition for normal release of address and routing informations is met (receipt of ACM, CON, messages)

Release all equipment and connection (Send release message)

–

T8

10–15 s

Local

When transit of incoming international exchange receives initial adress message

At receipt of continuity message

Release all equipment and connection into national network (Send release message)

–

T9

Interval specified in Q.118

Dual

When national controlling or outgoing international exchange sends latest address message after the receipt of ACM

At the receipt of answer

Release connection send back release message

–

T10

4–6 s

Dual

When last digit is received in interworking situations

At the receipt of fresh information

Send address complete message

–

T11

15–20 s

Dual

When latest address message is received in interworking situations

Send ACM

Send address complete message

–

Timers used in Recommendation Q.764 (Sheet 3 of 6)

Symbol	
Time–out value	
Significance	
Cause for initiation	
Normal termination	
At the first expiry	
At the following expiry	

Symbol	T12
Time–out value	4–15 s
Significance	Local
Cause for initiation	When blocking message is sent
Normal termination	At receipt of blocking acknowledgement
At the first expiry	Retransmit blocking message and initiate T12
At the following expiry	Same as the left until T13 expires

Symbol	T13
Time–out value	1 min
Significance	Local
Cause for initiation	When initial blocking message is sent
Normal termination	At receipt of blocking acknowledgement
At the first expiry	Retransmit blocking message and alert maintenance personnel and start T13. Stop T12

The reception of message should be continued until maintenance intervention occurs and circuit taken out of service as appropriate

T14

4–15 s

Local

When unblocking message is sent

At receipt of unblocking acknowledgement

Retransmit unblocking message and initiate T14 timer

Same as the left until T15 expires

T15

1 min

Local

When initial unblocking message is sent

At receipt of unblocking acknowledgement

Retransmit unblocking message alert maintenance personnel, start T15 timer and stop T14

The repetition of message should be continued until maintenance intervention occurs and circuit taken out of service as appropriate

T16

4–15 s

Local

When reset circuit message is sent

At the receipt of the acknowledgement (RLC message)

Retransmit reset circuit message and restart T16

Same as the left until T17 expires

T17

1 min

Local

When initial reset circuit message is sent

At receipt of the acknowledgement

Alert maintenance personnel retransmit reset circuit message, restart T17 and stop T16

The repetition of message should be continued until maintenance intervention occurs

Timers used in Recommendation Q.764 (Sheet 4 of 6)

Symbol		
Time–out value		
Significance		
Cause for initiation		
Normal termination		
At the first expiry		
At the following expiry		
T18		
4–15 s		
Local		
When group blocking message is sent		
At receipt of group blocking acknowledgement		
Retransmit group blocking message and initiate T18		
Same as the left until T18 expires		
T19		
1 min		
Local		
When initial group blocking message is sent		
At receipt of group blocking acknowledgement		
Retransmit group blocking message, alert maintenance personnel, initiate T19 and stop T18		

The repetition of message should be continued until maintenance intervention occurs and circuits taken out of service as appropriate

T20

4–15 s

Local

When group unblocking message is sent

At receipt of group unblocking acknowledgement

Retransmit group unblocking message and initiate T20

Same as the left until T20 expires

T21

1 min

Local

 When initial group unblocking message is sent

 At receipt of group unblocking acknowledgement

 Retransmit group unblocking message, alert maintenance personnel, initiate T21 and stop T20

 The repetition of message should be continued until maintenance intervention occurs and circuits taken out of service as appropriate

T22

4–15 s

Local

When circuit group reset message is sent

At the receipt of the acknowledgement

Retransmit circuit group reset message and restart T22

Same as the first expiry until T23 expires

Timers used in Recommendation Q.764 (Sheet 5 of 6)

Symbol

Time–out value

Significance

Cause for initiation

Normal termination

At the first expiry

At the following expiry

T23

1 min

Local

When initial circuit group reset message is sent

At the receipt of the acknowledgement

Alert maintenance personnel and restart Timer T23. Retransmit circuit group reset message. Stop timer T22

The reception of message should be continued until maintenance intervention occurs

T24

< 2 s

Local

When check tone is sent

At the receipt of backward check tone

Report failure

–

T25

1–10 s

Local

When continuity check failure is detected (on receipt of continuity recheck request)

–

Send CCR message

–

T26

1–3 min

Local

When second continuity check failure is detected

–

Send CCR message

–

T27

4 min

Local

When continuity recheck request is requested

At receipt of continuity check request message

Return to idle

–

T28

10 s

Local

When send CQM

At receipt of CQR

Alert maintenance

–

Timers used in Recommendation Q.764 (Sheet 6 of 6)

Symbol

Time–out value

Significance

Cause for initiation

Normal termination

At the first expiry

At the following expiry

T29

300–600 ms

Local

First congestion/first congestion indication after T30 expires

–

–

–

T30

5–10 s

Local

First congestion indication

–

–

–

T31

> 6 min

Local

Release of ISDN User part signalling connection based on CO SCCP

On expiry

–

Call reference reusable

T32

3–5 s

Local

On receipt of end–to–end message

On expiry

–

End–to–end message to be sent

T33

12–15 s

Local

When send INR

On receipt of INF

Release call

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T34

12–15 s

Local

When send circuits group query

On receipt of circuits group query response

Maintenance action

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