Time-Sequence Diagrams

This appendix contains sequence diagrams showing the relationship between the API service requests issued at an endpoint and service primitives issued to or by the transport provider. It includes these sections:

- Overview

  Describes the labelling and illustration techniques used in the diagrams.

- Diagrams

  Includes the time-sequence diagrams.

Overview

Each time-sequence diagram shows a local transport user (Local TU) issuing requests and responding to events at the local transport interface (API), and a transport provider (TP) receiving request and response primitives, and issuing indication and confirm primitives.

Diagram Labelling

The transport provider is shown as a single entity, although, in actuality, there is a local and remote entity between which the protocol exchanges take place. Also, the transport interface between the remote transport provider and the peer transport user (Remote TU) is not shown.

The vertical lines delineating the transport provider represent the Transport Service Access Points (TSAPs) for the local and remote transport user. The vertical lines delineating the transport interface represent the endpoint from the perspective of the transport user and transport provider.

All interactions between the local transport user and the API are shown in terms of the service functions executed, and their normal or abnormal completions:

- The invocation of a function is labeled a request
- Its successful completion is simply labeled a completion
- An abnormal completion is indicated by error
- An asynchronous event that causes an exit routine to be scheduled is labeled an indication.

Synchronous and Asynchronous Modes

Some sequences are shown in synchronous and asynchronous mode:

- Synchronous mode applies when service requests are issued synchronous with normal application program processing. Generally, the application program is running under control of a PRB.
- Asynchronous mode applies when service requests are issued asynchronous with normal processing. This mode requires use of exit routines, and requests are often issued under control of the IRB that runs the exit routine.

In synchronous mode, the time relationship between the occurrence of an event (for example, the arrival of some data) and invocation of the corresponding service function (for example, TRECV) is unimportant. However, in asynchronous mode, the service function is generally issued in response to the event.

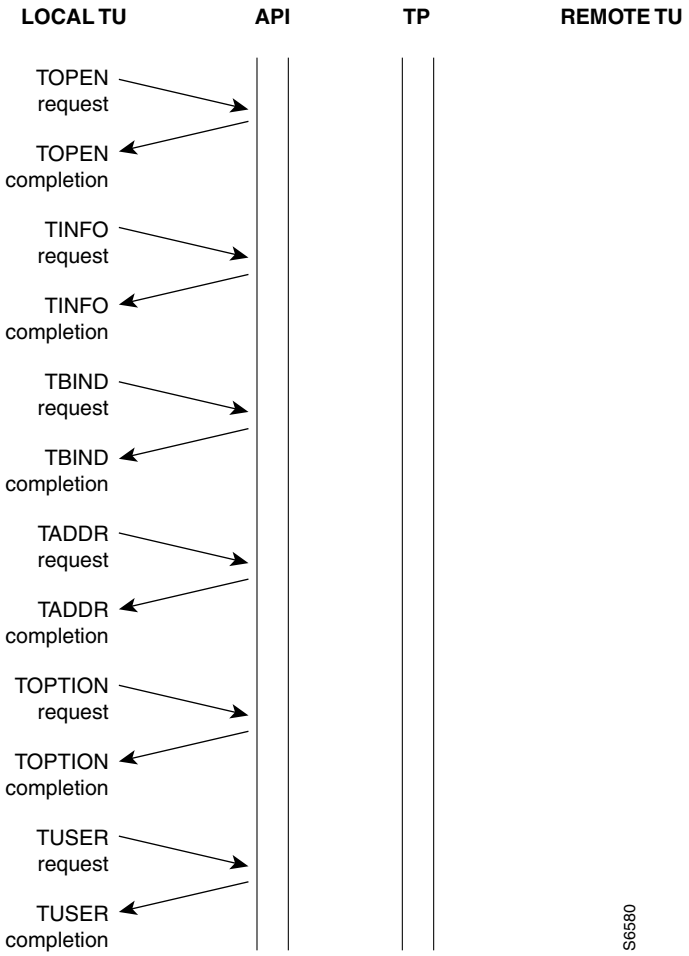
Completion and Error Events

Completion and error events occur when a TCHECK control function is executed. The TCHECK function may be executed by the API (OPTCD=SYNC) or the transport user (OPTCD=ASYN).

Diagrams

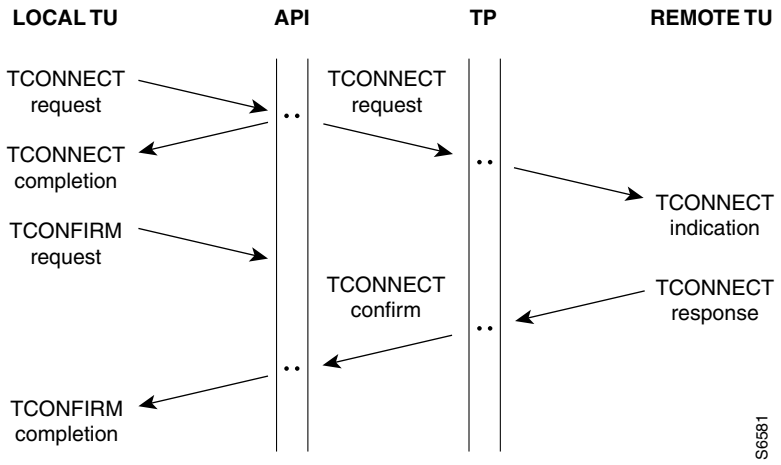
This section includes the time-sequence diagrams.

Local Endpoint Management (Initialization)

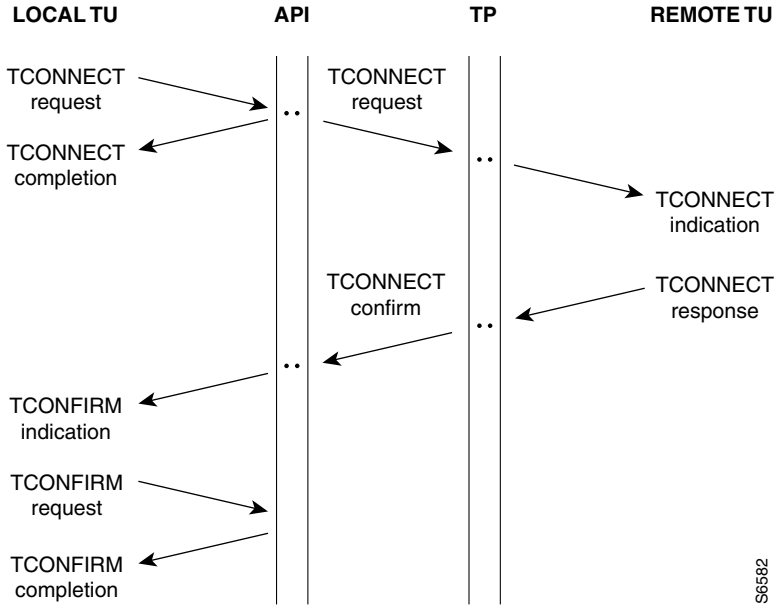


Client Connect Sequence (Accepted)

Synchronous Mode

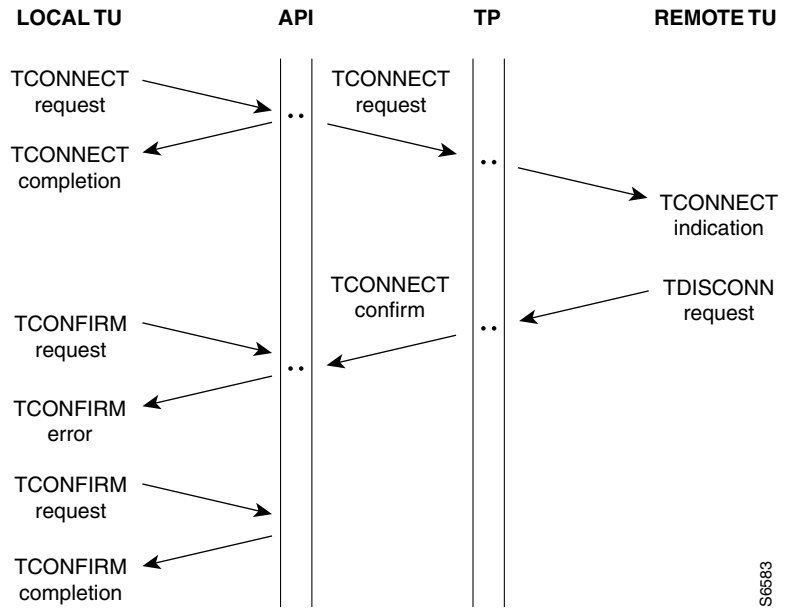


Asynchronous Mode

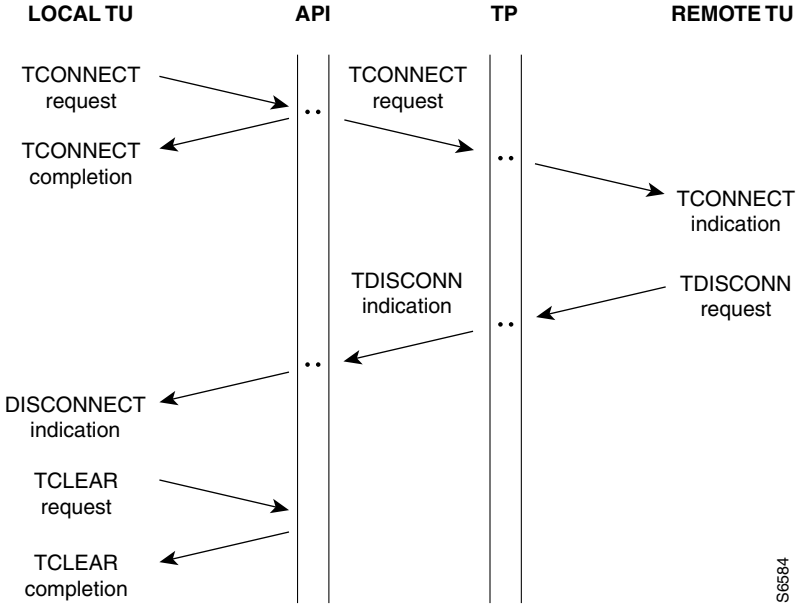


Client Connect Sequence (Rejected)

Synchronous Mode

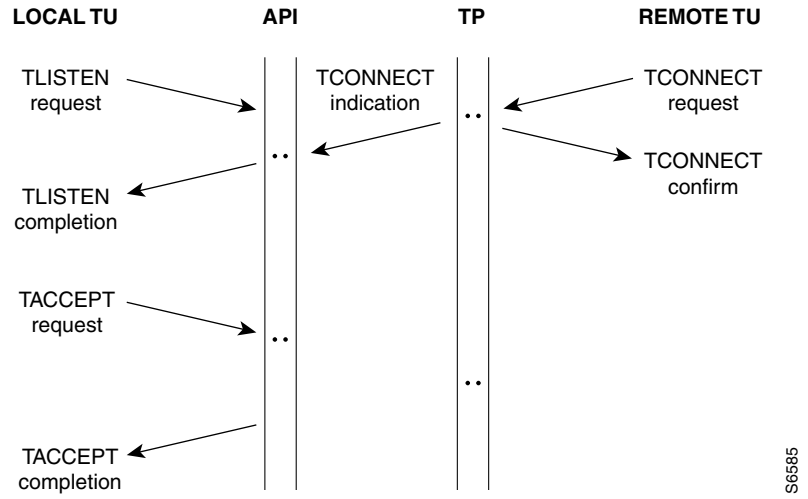


Asynchronous Mode

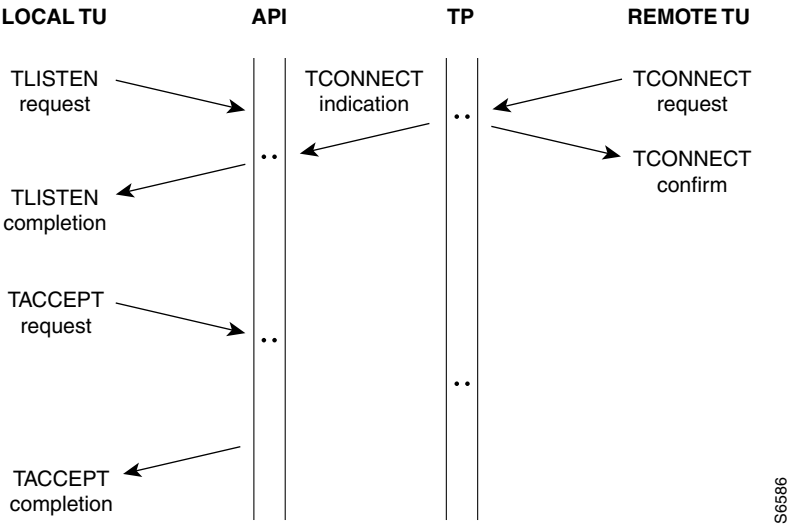


Server Connect Sequence (Accepted)

Synchronous Mode

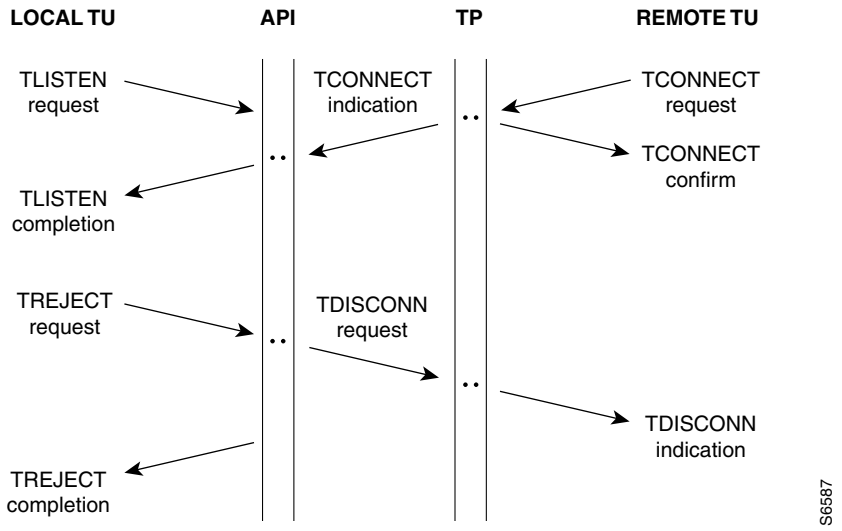


Asynchronous Mode

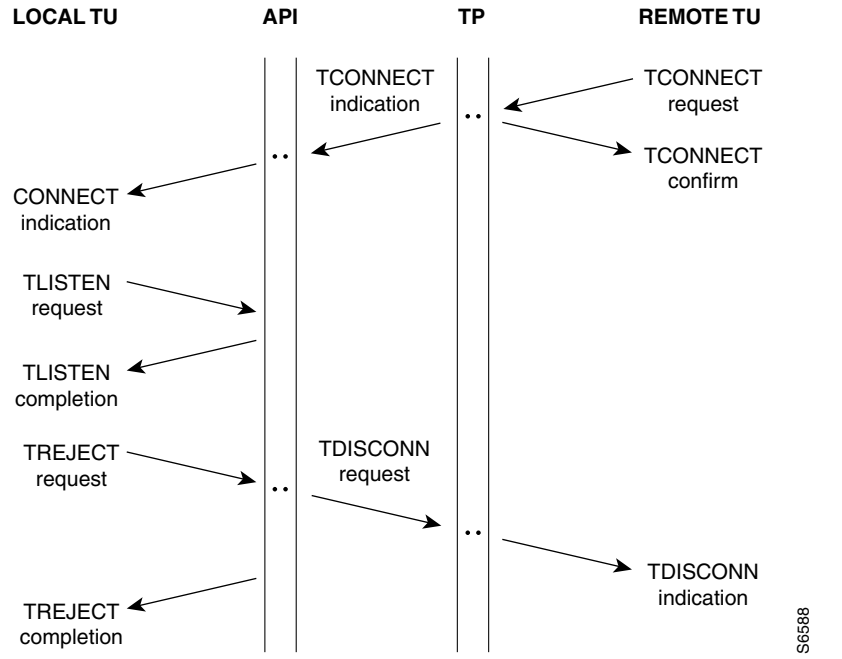


Server Connect Sequence (Rejected)

Synchronous Mode

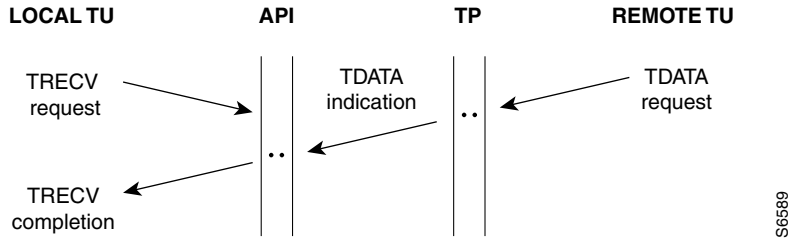


Asynchronous Mode

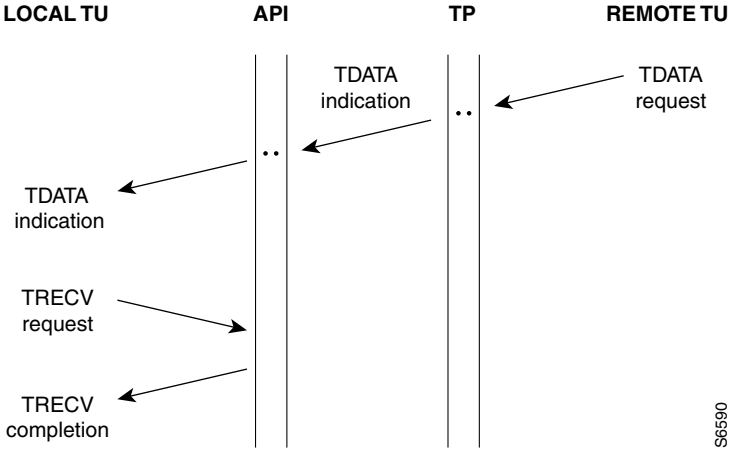


COTS Receive Data Sequence

Synchronous Mode

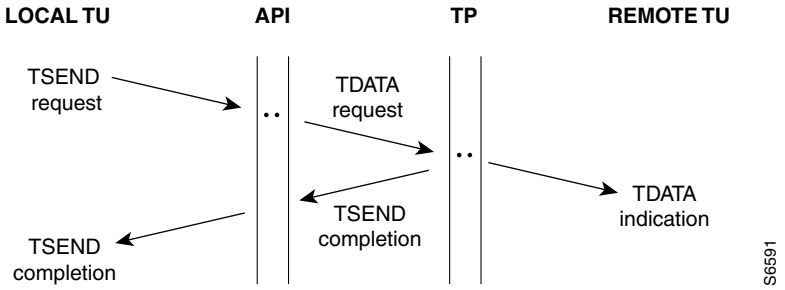


Asynchronous Mode

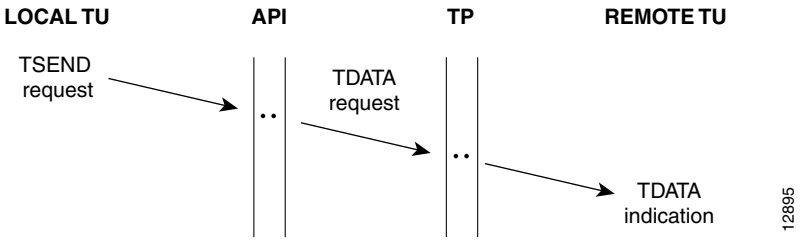


COTS Send Data Sequence

TLI Mode

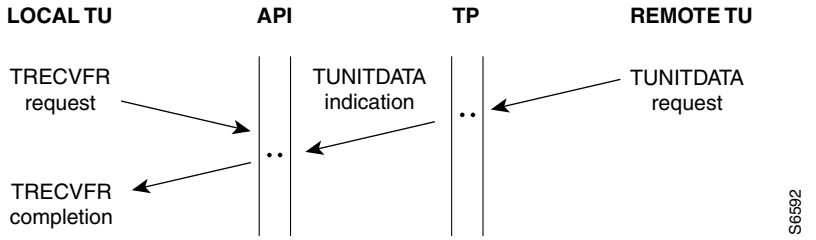


Socket Mode

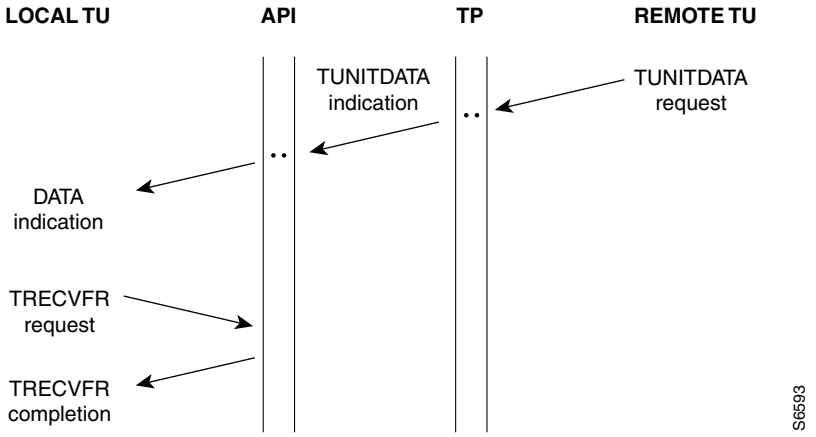


CLTS Receive Data Sequence

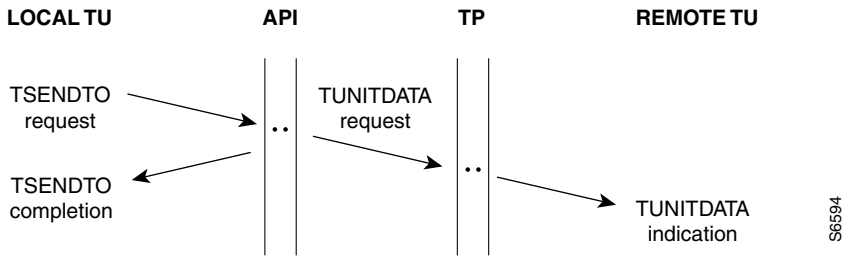
Synchronous Mode



Asynchronous Mode

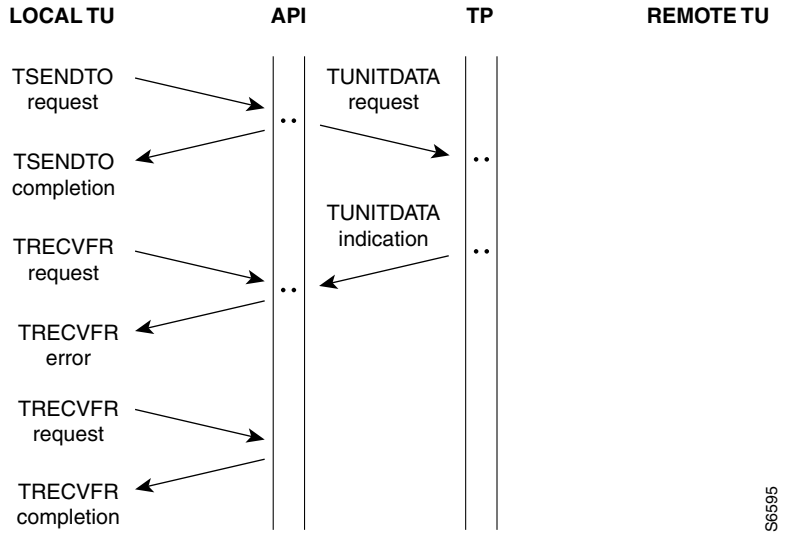


CLTS Send Data Sequence

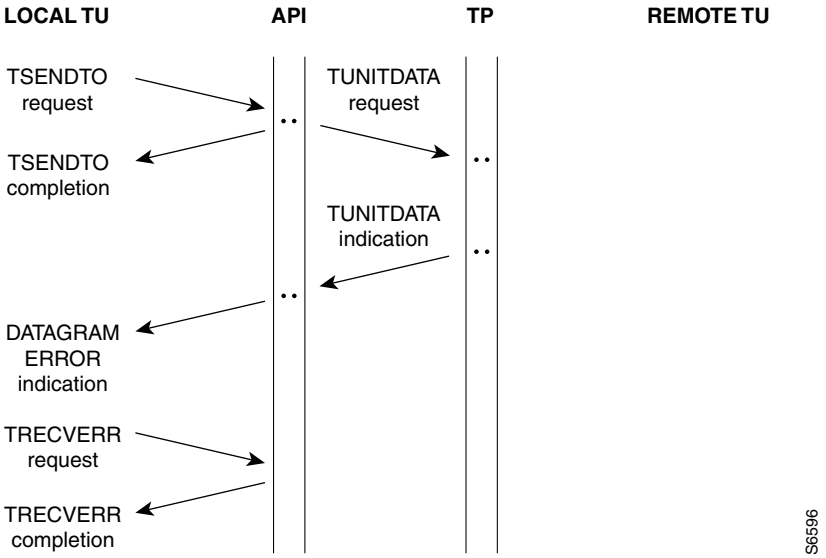


CLTS Datagram Error Sequence

Synchronous Mode

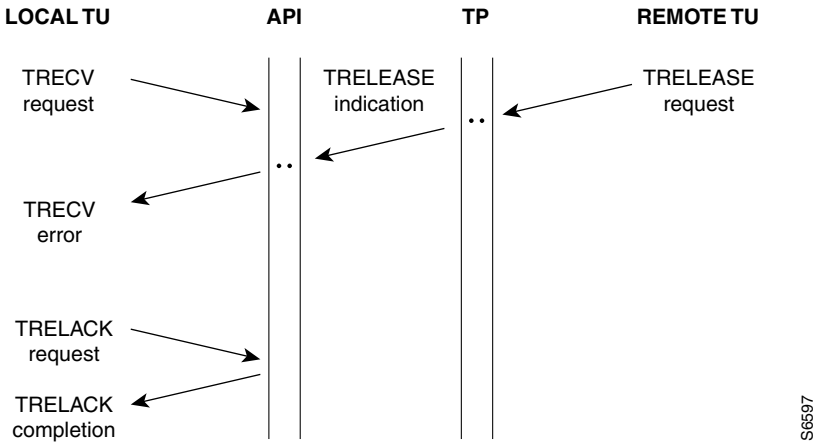


Asynchronous Mode

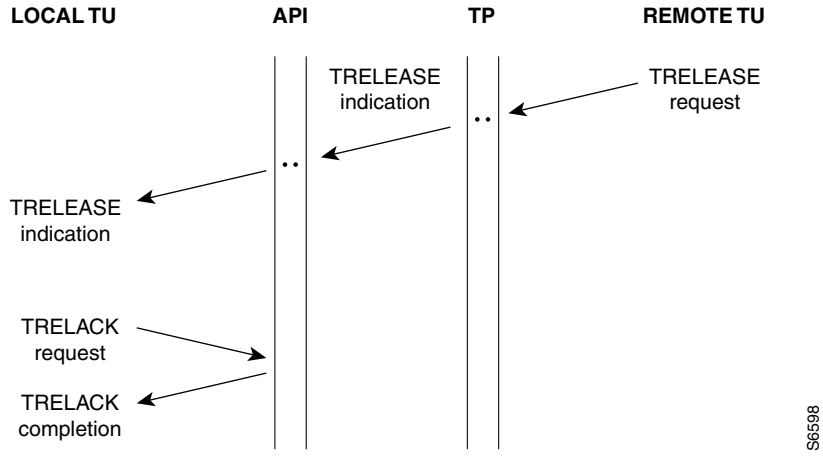


Orderly Release Sequence

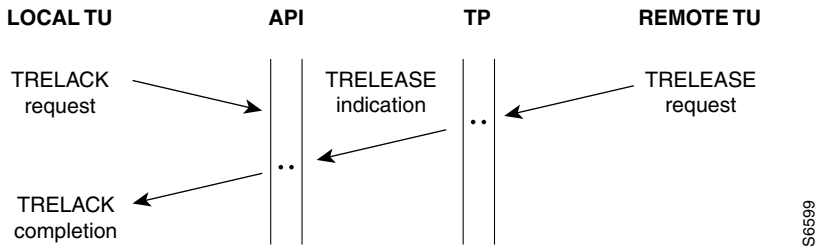
Receive Path – Synchronous Mode



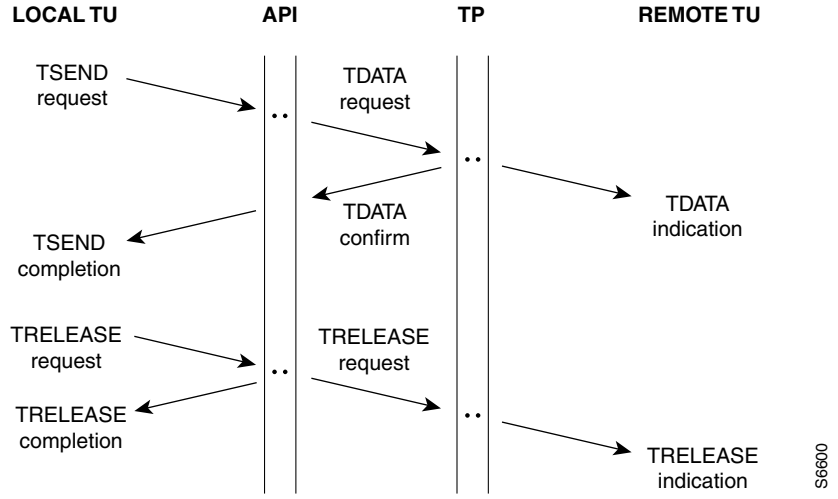
Receive Path – Asynchronous Mode



No Receive Data – Synchronous Mode

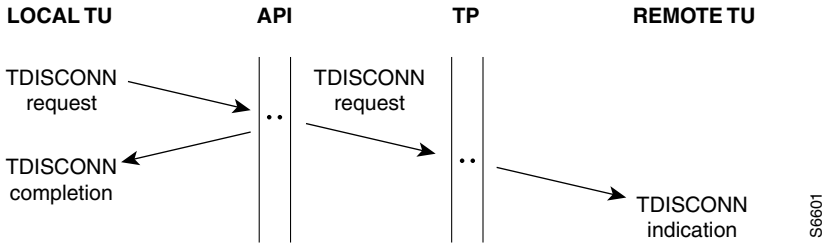


Send Path

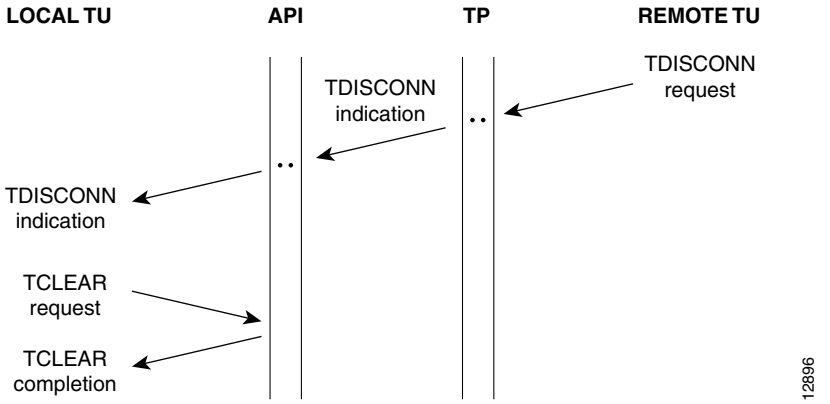


Abortive Disconnect Sequence

Locally Initiated

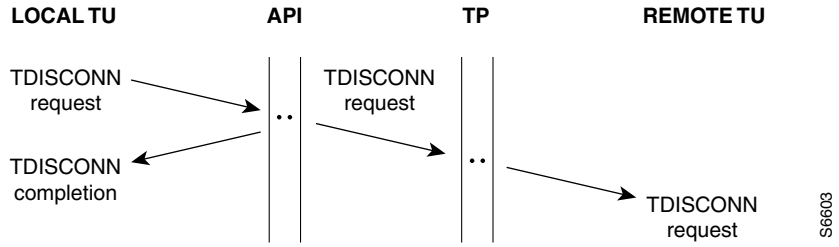


Remotely Initiated

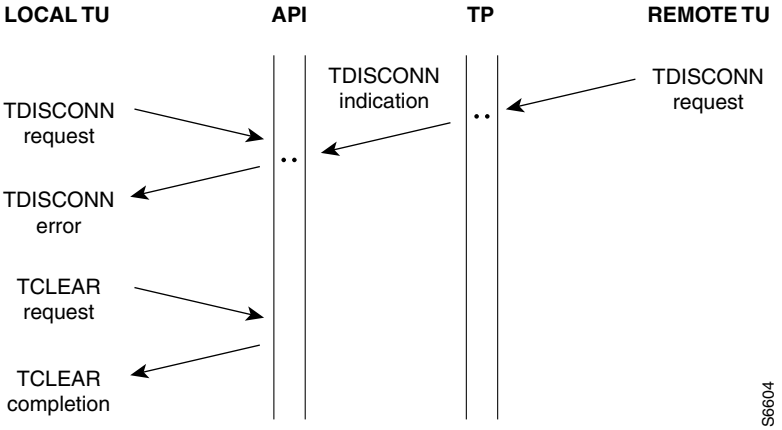


Simultaneous Disconnects

Transparent



Non-Transparent



Local Endpoint Management (Termination)