For questions and additional information contact:
Magnus Larsson, magnus@stril.com
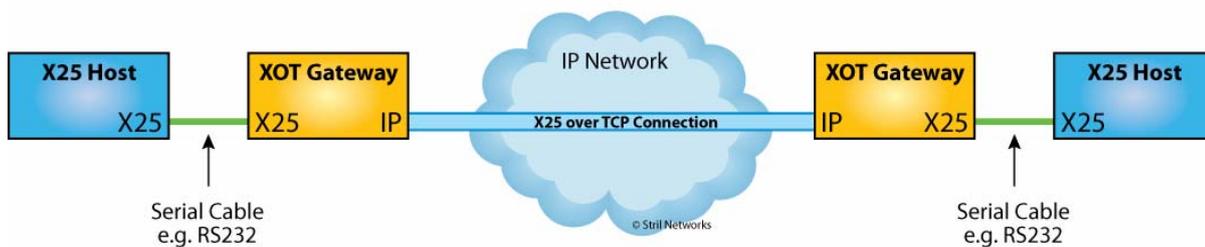Phone +46 (0)8 795 82 42

X25 over TCP (XOT)
Generic design examples

This document describes some general design solutions for transporting X25 over TCP/IP. Keep in mind that these are only general examples. We are happy to assist to build a custom solution to meet your requirements and look forward discussing your needs.
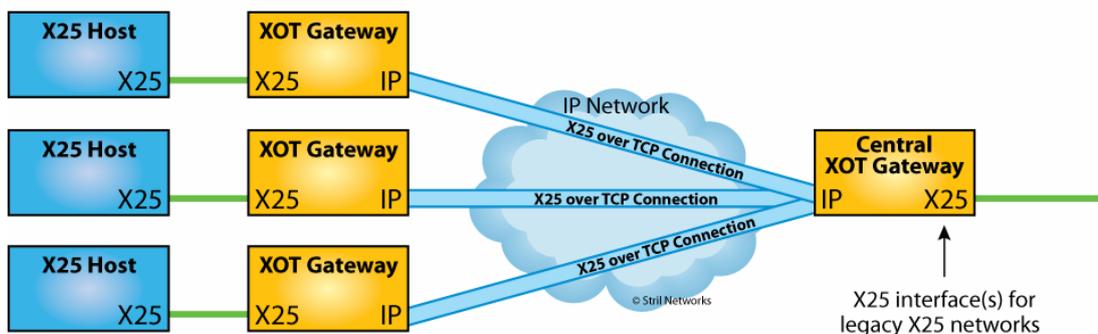
Simple point to point

The XOT getaways encapsulate all X25 traffic from the serial interface into TCP and send it over the IP network to the other gateway which sends the X25 packets out on its X25 serial interface. The X25 serial interface can either be a DCE, where the clock rate is set by configuration, in the range of 1200bps to 2Mbps, or a DTE where the X25 host provide the clock.

- Extended features:
- The XOT Gateways can have several X25 interfaces.
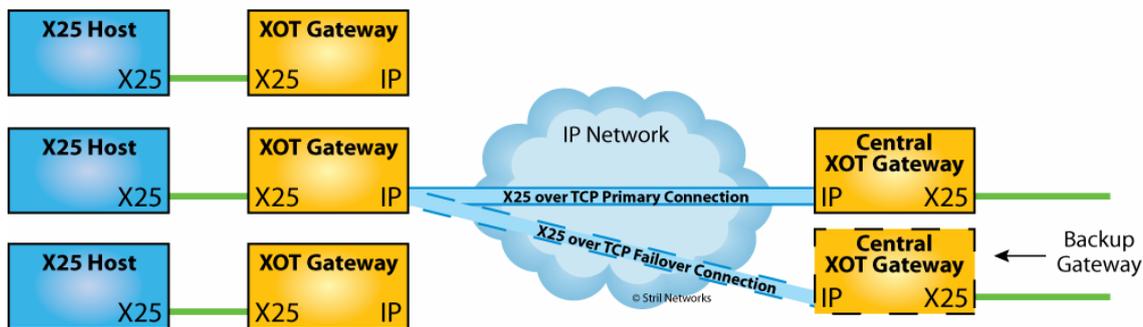- The XOT link can be encrypted.

Star shaped Client/Server solution

Several Client XOT Gateways forward their X25 traffic to a central XOT Gateway. This is a common solution for remote sites communicating with X25 to a central mainframe with X25 interface.

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Several central gateways can be added to improve reliability by redundancy. Each Client XOT Gateway can have a list of Server XOT Gateways to use. If one Central XOT Gateway is unreachable, due to hardware failure or network problem, the next on the list is tried. Load sharing is done by rotating the list differently among the Clients. E.g. half of the clients prefer Gateway A as their primary and Gateway B as their backup, and the other half has Gateway B as their primary and A as backup.

Mesh

Each XOT Gateway consults an X25 routing table and creates XOT links depending on destination address (or other criteria). The X25 routing table can be local to each XOT Gateway or a centralized lookup service can be maintained to make administration easier. The lookup service is a generic DNS server with codes entries translating X25 addresses to IP endpoints to use for XOT. When the XOT gateway need to route a X25 packet, it builds a DNS query based on the destination address and sends it to the DNS server, which returns the configured XOT IP address to use for forwarding the traffic.