

# How Does FaxLab Support T.38 Testing?

Control of both ends of a T.38 fax call

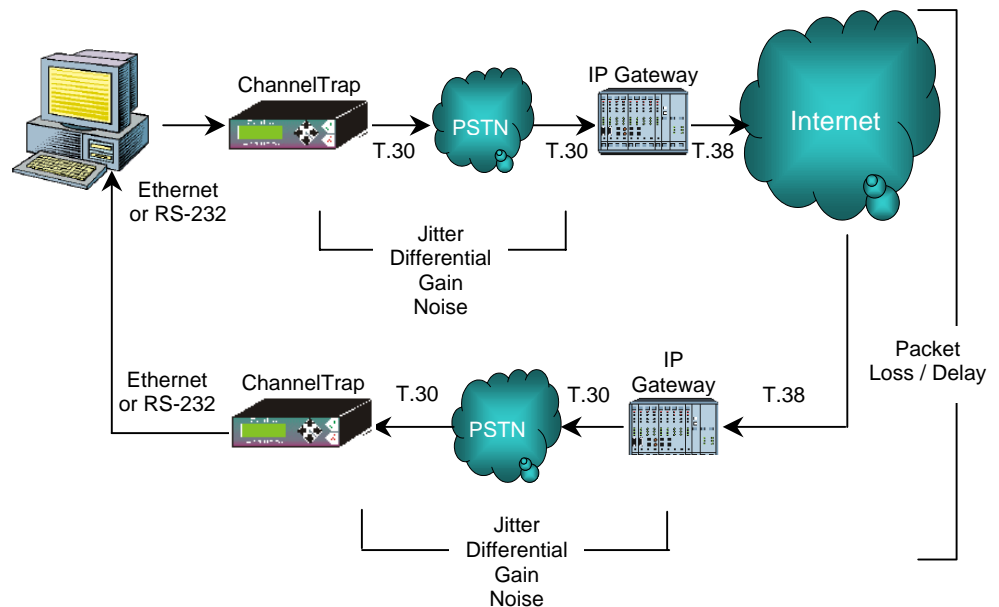
EQM provides a qualitative value for transmission quality

Critical analysis of T.30 compliance

Analyzes interoperability of a gateway's PSTN interface with 130 different V.17 fax devices and 15 different V.34 fax devices

The ITU-T T.38 recommendation is intended to provide an intermediate protocol to support the T.30 facsimile protocol. The goal of this effort is to allow transmissions from T.30 compliant devices (ordinary fax machines) over an IP network, usually the Internet. This is achieved by creating T.38 compatible gateways that convert T.30 messages normally sent over switched circuit networks to an intermediate (T.38) protocol that is specifically adapted for a switched packet IP network.

FaxLab facilitates testing of T.38 gateways by allowing the user to precisely control both ends of a T.30 facsimile call. Schematically, the test arrangement might look like the following:



The analog connections through the PSTN are subject to phase and amplitude jitter, as well as differential gain and circuit noise. FaxLab employs a measure of modulation symbol quality called the Eye Quality Monitor (EQM) that provides a qualitative value for these effects on transmission quality. Internet transmissions can incur excessive packet delay and outright loss. FaxLab performs an end-to-end comparison of signal delay to milliseconds and signal content to the bit level.

In addition to the above, FaxLab's full end-to-end control of a facsimile call allows a critical analysis of the system's T.30 compliance as well as the interoperability of the gateway's PSTN interface with 130 V.17 and 15 V.34 fax devices.