



## FaxLab® Facimile Compatibility Test System

FaxLab saves time, reduces costs and helps you solve interoperability problems, and the level of testing provided by FaxLab is much deeper than you can accomplish manually. FaxLab is used by device manufacturers, network equipment providers and carriers, and corporate IT departments to simplify and automate fax compatibility testing.

### Key Benefit

- FaxLab executes up to 32 fax calls simultaneously, reducing the time required for testing and enabling generation of traffic conditions from different device emulations.

### Automation

FaxLab's V.17 and V.34 automation can remotely:

- Select, start and stop Channel-Traps
- Select and execute test calls using specified emulations
- Load and execute saved ChannelTrap test configurations including call lists
- Log execution of test calls
- Retrieve pass/fail and ITU Figure Of Merit test call results

### Faxlab Overview

FaxLab plays back the behavior of real-world devices, allowing developers and integrators to replace a room full of facsimile devices with software.

Testing compatibility is an essential step in bringing new fax devices and technologies to market. In the past, the only way to perform this testing was to purchase large numbers of fax devices, and manually test dozens of devices and hundreds of feature combinations.

FaxLab uses QualityLogic's ChannelTrap, an external hardware device that generates and receives facsimile traffic. Using additional ChannelTraps, FaxLab executes up to 32 fax calls simultaneously, reducing the time required for testing and enabling generation of traffic conditions from different device emulations.

### In-Depth Emulation

During profile creation, FaxLab initiates an extensive collection of calls as sender and receiver, directing the device through the widest possible variety of call paths and conditions and measuring hundreds of distinct call parameters. Most parameters are recorded multiple times for variations in data modulation, data rate, image encoding and resolution. FaxLab also presents the device being profiled with illegal T.30 conditions to determine its reaction. The resulting profile is then test-

ed to ensure that it accurately represents that device's performance.

## Compatibility Testing

FaxLab sends fax calls to and receives calls from the device under test, using the profiles you select. You may use actual sampled values, including best- and worst-case behavior, or synthesize statistically valid values based on the sampled data. No other method more completely and accurately represents a device's performance.

## End-to-End and T.38 Testing

Timing delays, dropped packets, or other network anomalies can corrupt fax calls as they move through a complex communications network. FaxLab automates testing for these types of transmission errors.

You can create a test system that plays the originator and answering party in a fax call using FaxLab and ChannelTraps. The system identifies message degradation caused by the network transport, as well as fax protocol violations in gateways. ChannelTraps can be operated over a network or via modem, so the system can diagnose problems at remote locations, reducing support costs.

## Quality of Image

FaxLab implements the ITU Figure of Merit recommendations E.453 and E.458 for classifying fax image quality and page transmission success. Its expanded statistical report makes statistical summaries of user-selected test call groups. FaxLab can also measure post-dial delay parameters.

## FaxLab Product Structure

FaxLab contains a single installer for the V.17 and V.34 modules of the product. The V.17 simulations are placed in one directory and the V.34 simulations in another, making it much easier to find the test cases you need and switch back and forth between V.17 test software and V.34 test software.

## FaxLab Specifications

- Comprehensive compatibility testing using facsimile device emulations
- Supports data rates of 2400, 4800, 7200, 9600,

- 12,000, 14,400, and up to 33,600 bps
- MH, MR, MMR, JPEG (full color & grayscale), T.85 bi-level JBIG encoding
- On-screen display of all image encodings
- Easily configurable for testing networks
- V.8 or non-V.8, V.21 start-up in any combination at either end of set-up
- Detailed modem status in call timeline
- Selectable send and receive test modes
- Call progress indicator
- Pass/fail based on transmission success
- Warnings based on T.30 limits
- Supports V.17, V.33, V.29; V.27ter, V.8, V.34

## Minimum System Requirements

- PC with 2GHz processor - Intel Core or faster, or compatible processor
- 2GB of RAM
- 100GB of available hard disk space
- Microsoft OS versions from Windows XP to Windows 10 (English versions)
- At least one RJ-45 Ethernet port
- Super VGA (800 x 600) video adapter, monitor
- CD-ROM or DVD drive
- Keyboard and Mouse or compatible pointing device

## Key Emulation Parameters

- DIS capability bits
- INFO0 capability bits
- Non-compliant DIS and DCS signal construction
- MPh capability bits
- Duration of inter-signal silent periods
- Predefined test calls for each device
- ECM (Error Correction Mode) support
- Support for all T.30 image resolutions
- T.2 and T.4 timeouts

