SMILOG

SOFTWARE FOR MOBILE INTEGRATION IN LOGISTICS

SmiTelnet
Product Launch Kit

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Proprietary Information

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Revision History

0.1		• Beta Release	Mike Brandys	August , 2014

Known Issues

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- Application only supports English, French, and German Languages .

Introduction

In order to maintain all information about SmiTelnet in one place, this manual deals with:

- Product History and Market Requirements
- Pricing
- Functionality
- Design Considerations
- Technical Information
- Release Notes

History and Market Requirements

There are many Telnet emulators available for Android. Some are free and often aimed at users that want to access the Linux console. Others are expensive and include session persistence and the ability to remap the screens and add other controls like buttons.

SmiTelnet is aimed at a very specific market, where the end user wants to process simple WMS transactions on a small screen that is typically no more than 15 x 30 characters. These applications are typically function key driven.

Most emulators require extensive configuration so that the small screen layout displays properly on the device's screen and the function keys F5 and higher work.

SmiTelnet has been designed and tested with the SAP Console Telnet solution. It has been preconfigured so that the font will properly scale for a 16x20 character layout and all function keys are pre assigned to match the VT220 standard.

It also has been optimized to allow easy data entry on devices that often do not have a dedicated keyboard, or function keys.

SmiTelnet is aimed at customers that have existing SAP Console Telnet solutions and want to upgrade their unsupported CE terminals to new Android terminals but do not want to make any changes to the back-end. It allows them to continue to use the same telnet server without modifications.

In addition it is also significantly less expense than emulators offer by competitors like StayLinked and WaveLink

Selling SmiTelnet

The target market are existing SAP Console customers that want to upgrade to new Android based terminals but do not want to make changes or upgrades to SAP, or the Telnet servers.

In addition SmiTelnet includes features that typically were not available on the CE terminals including:

- SSL data exchange for secure connections across the internet.
- Gesture recognition that can be used in place of pressing function keys
- Integrated Text to Speech, and Speech Recognition.

Pricing Considerations

SmiTelnet Licenses can be purchased directly from SMILOG Ltd at $xxxx per copy. (suggested list price is $49 USD)

The software can be installed on any Android device without a license, but it will display a pop-up message indicating the product is unlicensed on started up and after every 100 key strokes.

Limitations of SmiTelnet

- Requires a WIFI / TCPIP connection. No support for Narrow Band.

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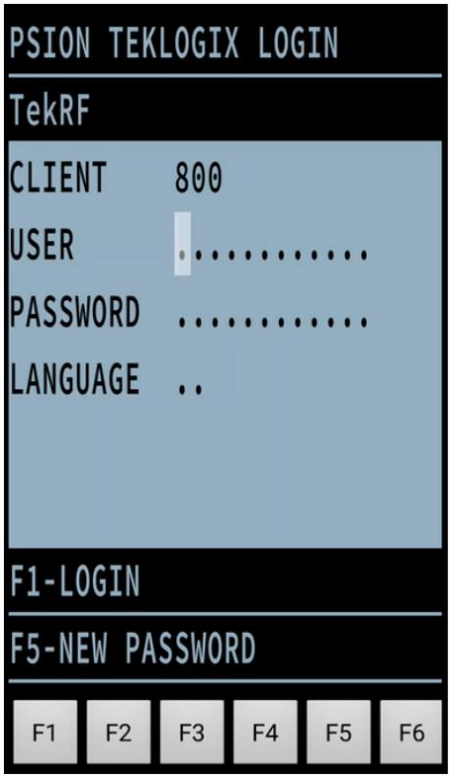
Basic Look and Feel

SmiTelnet is targeted at existing SAP Console customers that connect to SAP systems through TEKTERM or other TELNET emulators running on CE terminals

Below is a TEKCONSOLE SC login screen show on SmiTelnet.



SAP applications are primarily function key driven. Since most Android devices do not include function keys, there is a “button bar” at the bottom of the screen that allows the user to send function key presses. This is a scrollable (Fling style) bar providing buttons for F1-F12 and other buttons for features like “Voice” and “Scan via Camera.

Many Android devices to not have a fixed Keyboard. Data is often entered via a pop-up up keyboard

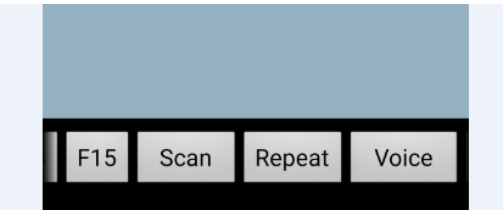
This keyboard can be openned and closed by touching any location on the screen.

It can also be closed by pressing the Back button.

If the Android Terminal is equipped with a built in scanner, data can be scanned into a field using a “Wedge Reader” application that will convert the barcode to keystrokes. Terminals with built in scanners will likely have a dedicated “scan” button.

If the Android device is equipped with a camera, the camera can be used as a barcode scanner. The built in scanner application can read 1D and 2D barcodes and can also read Text (OCR).

The built in camera scanner can be run by pressing the “Scan” button, on the “Button Bar”



The Scanner shows the view of the camera, if the center of the red “cross hairs” touch the barcode it will be read automatically. If the SCAN button is press and held, the scanning will be suspended until the SCAN button is released, this allows for aiming before scanning

Note: if OCR is enabled, the cross hair will be Blue instead of Red.

Touching the screen will toggle between Barcode mode and OCR mode, if the CAMERA parameter is set to 3.

Additional Features

Gestures

Gestures can be used to replace function key presses.

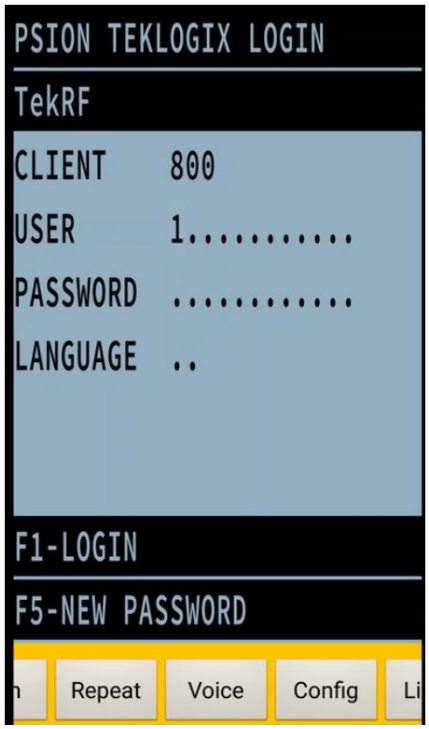
By default, the Gestures will appear as a yellow line, as illustrated below. (These can be turned off in the Configuration file.)

Below a list of built in gestures:

Check mark	ENTER
Line to the left	Left Arrow
Line to the right	Right Arrow
The letter lower case e	F4
Circle	F5

Speech Recognition

SmiTelnet will accept speech input using Google's speech recognition. This is activated by pressing the "Voice" button on the "button bar". This will cause the edges of the screen to go yellow. Spoken Data will be processed continuously until the Speech Recognizer times-out, or the Voice button is pressed again.



The spoken value will be placed in the active field.

It will also accept spoken commands for function key presses,

The user can say "Function 1", to press the F1 key,

The user can say "Select" to press the ENTER key.

Text to Speech

If data is sent to AUX 4, the text will be spoken, rather than displayed.

Installing SmiTelnet

SmiTelnet is not currently available in the Google Play Store

In order to install it on your Android device, you must install it directly from an .APK file (commonly called side loading)

The first step is to allow 3rd party applications to be installed on your Android Device, this is usually turned off by default.

On a standard android O/S, this is done via the SETTINGS, in SECURITY, where you set the “Unknown Sources” option to “ON”.

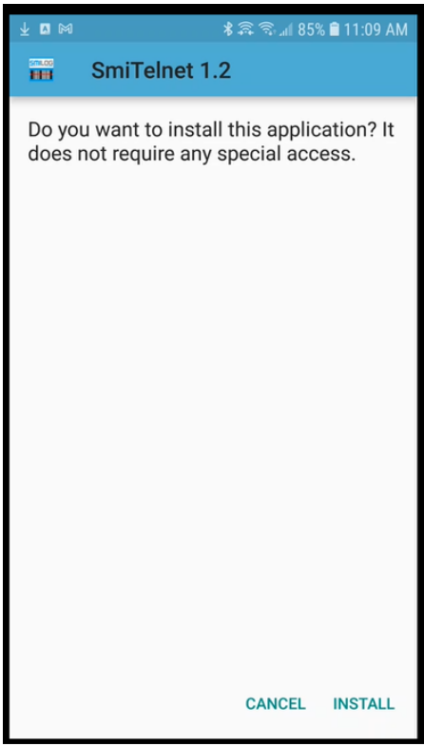
(On many Samsung phones, it is under LOCK SCREEN AND SECURITY)

Then copy the APK to device, and click on the APK file. This can be done by opening an EMAIL on the device and clicking on the APK file, or using the device’s web browser and downloading the file from the link the SMILOG webpage or from the link below

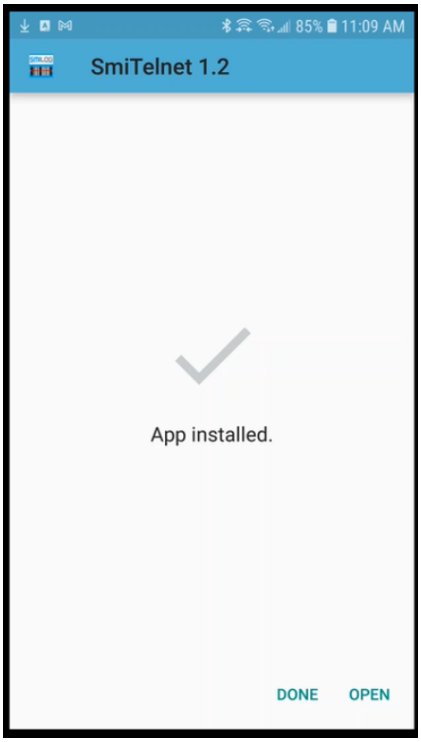
http://www.smilog.ca/x/smitelnet

Clicking on the APK will start the installation

(note: same for SmiTelnet 1.3 and later versions), but will vary depending on version of Android)



Once installed, open SmiTelnet application from the installer



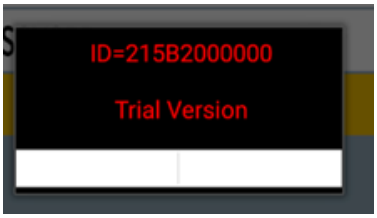
Or from the Desktop ICON

The license key is unique to each terminal, and cannot be moved or reused on a different terminal.

The user will be informed that a license key is required each time SmiTelnet is started and after every 100 key strokes. This will stop once a valid license key is installed.

NOTE: both permanent and expiring license keys are available for SmiTelnet7.

To enter a license, Press the “License” Button on the button bar. A popup will appear as illustrated below



To obtain a license key, send proof of purchase to support@smilog.ca

Please include the Device ID displayed at the top of the licensing Pop-up message.

License keys can be delivered via the Web. Automatic Licensing is attempted each time the application is started. It will send a request for a key. If the Device ID is recognized by the license server, it will send back a valid key.

License can also be scanned in by creating a code 128 barcode with the following format

(scan prefix)**<**(license key)**>**

Example: **~<64D5434CDD8DC1C9>**

NOTE: only a valid scanned license keys will be installed. If an invalid key is scanned it will not overwrite the existing key.

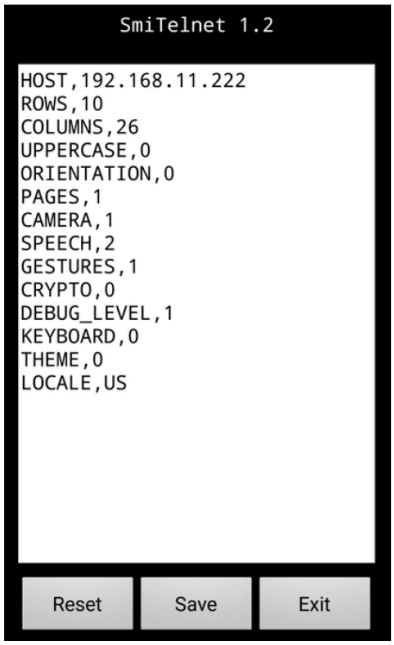
Configuring SmiTelnet

SmiTelnet is configured by editing a comma delimited configuration file.

The contents of this file could be scanned in using a single 2D barcode.

The configuration file is edited by pressing the" Config" button, on the "button bar, The following screen will appear,

NOTE:. Not all parameters are included in the default (Reset) configuration. If a parameter is not included in the view below, the default value is used.



Each of the configuration parameters is explained below:

Host connection address:

HOST, <value>

Where <value> is the IP address or DNS name of the TEKRF or TEKCONSOLE server.

Default: 192.168.11.222

TCP port

PORT, <value>

Where <value> is the TCP port used to connect to the Telnet server, or controller

Default: 23

Number of Rows

ROW, <value>

Where <value> is the number of rows to display on the screen, this should be either 10 or 15

Default: 10

Number of Columns

COLUMNS, <value>

Where <value> is the number of rows to display on the screen, this should be either 26 or 30

Default: 26

Enable Uppercase only input

UPPERCASE, <value>

Where <value> = 0 to disable uppercase only.

<value> = 1 convert to upper cases except for password fields.

<value> = 2 convert to upper cases for all fields.

Default: 0

Screen Orientation

ORIENTATION, <value>

Where <value> = 0 Portrait.

<value> = 1 Landscape

<value> = 2 Reverse Portrait (upside down).

<value> = 3 Reverse Landscape (upside down).

Default 0

Enable Camera as Barcode Reader:

CAMERA, <value>

Where <value> = 0 to disable camera as scanner,

<value> = 1 to enable camera as barcode scanner,

<value> = 2 to enable camera as Text scanner,

<value> = 3 to enable camera as barcode and Text scanner,

Default 1:

Enable Speech Features

SPEECH, <value>

Where <value> = 0 to disable TTS and Speech Recognition,

<value> = 1 to enable TTS

<value> = 2 to enable TTS and Speech Recognition

Default 2

Enable SSL data exchange

CRYPTO, <value>

Where <value> = 0 to disable SSL data exchange, all data will be sent in plain text

<value> = 1 to enable SSL data exchange, but ignores Certificate, all data will be encrypted.

<value> = 2 to enable SSL data exchange, all data will be encrypted.

Default 0

Debug level

DEBUG_LEVEL, <value>

Where <value> = 0 to 6. The higher the number, the more details that are sent to iLog.

Default: 6

Enable Gestures to simulate function key presses:

GESTURES, <value>

Where <value> = 0 to disable gestures,

<value> = 1 to enable gestures,

Default 1 (on)

Keyboard Only (Disable Popup Keyboard)

KEYBOARD, <value>

Where <value> = 0 use both

<value> = 1 use physical keyboard only, .

Default: 0

Screen Color Theme

THEME, <value>

Where <value> = 0 use default SmiTelnet colors

<value> = 1 use Dark Mode colors

<value> = 2 use TekTerm default colors (black and white)

Default: 0

Override Device Locale

Locale, <value>

Where <value> = DEVICE uses the devices locale

<value> = US

<value> = DE

Default: US

Scan Prefix

SCAN_PREFIX <value>

Where <value> is set to single character that will trigger “scan to configure” and “AIAG barcode parsing”

This can be set to a space character (Blank) to completely disable the scan features

Default: ~ (ascii 126, hex 0x7E)

Auto License Web address

LICENSE_URL <value>

Where <value> address of web service use to automatically deliver license keys”

This can be set to space character (Blank) to completely disable this feature

Default: http://portal.smilog.ca/myLicense/Service1.svc/json/

FKEY Fling Bar location

BAR_LOCATION, <value>

Where <value> = 0 bottom of screen

<value> = 1 top of screen

Default: 0

LOCK Configuration

LOCK, <value>

Where <value> is the password, up to 16 characters. Will not prompt for a password when the CONFIG button is pressed if blank.

Default: <blank>

SCAN TO CONFIGURE

Any of the configuration parameters can also be scanned in by creating a code 128 barcode with the following format

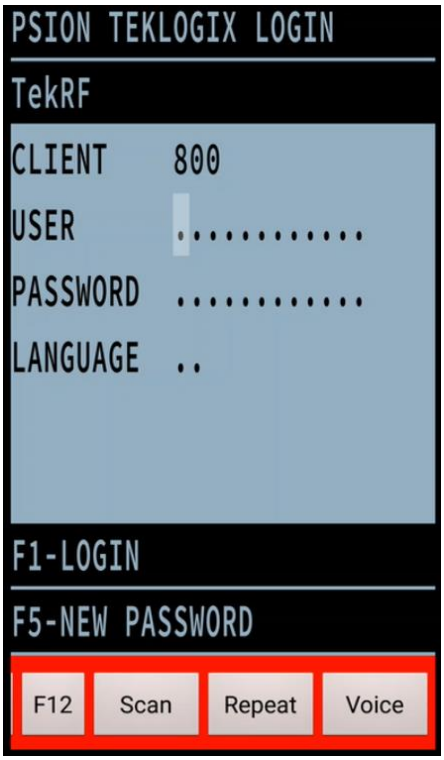
(scan prefix)**<**(parmeter)**,**(value)**>**

Example: **~<HOST,10.0,0.1>** will set the host connection to IP address 10.0.0.1
Example: **~<THEME,1>** will set the screen colors to Dark Mode

The configuration can be reset using the RESET Command

Example: **~<RESET,0>**

After a configuration barcode is scanned the edges of the screen will become red (as illustrated below)



Multiple barcodes can be scanned, but will not take effect until the WRITE command is scanned.

Example: **~<WRITE,0>**

Or the changes can be cancelled using the CANCEL command, or by restart the application, or pressing the CONFIG button.

Example: **~<CANCEL,0>**

Once the WRITE Command is scanned the application is restarted.

Appendixes

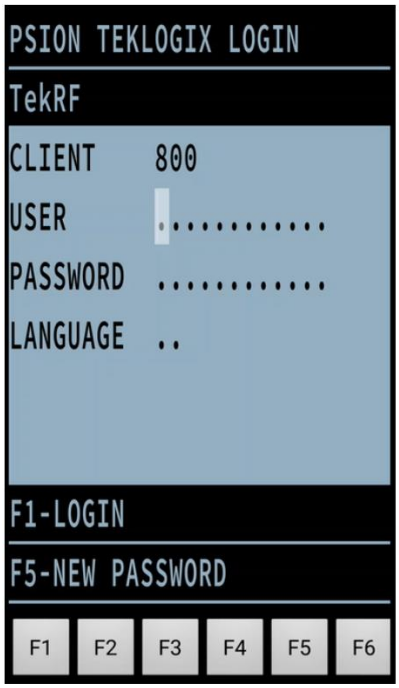
Appendix A – Debug Feature

The (!) button, on the “button bar” will pop up the last TESS commands sent to and received by the Server.

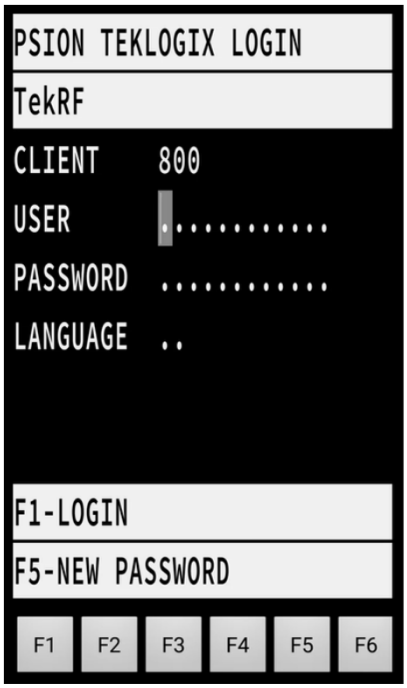
This can be useful for capturing events the produce unexpected screens or results.

There is a button on the Debug pop-up that will send this information directly to support@smilog.ca if a mail application is installed on the Android Device.

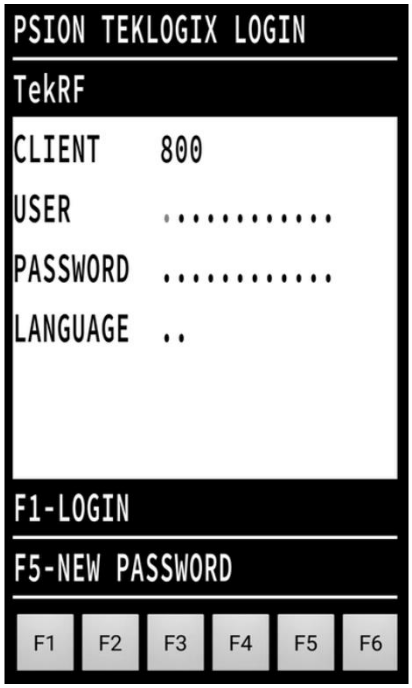
Appendix B – Themes



SmiTelnet DEFAULT



DARK MODE



TEKTERM

Appendix C – Scan To Configure Barcodes Samples

Generated using:
https://barcode.tec-it.com/en/Code128