Le890SLVVP VeriVoice Professional Software P1.4.0

Document ID# 134644 Version P1.4.0 Jul 21, 2014

This document describes new features and corrected errata for the Le890SLVVP VeriVoice™ Professional Software. Refer to the Line Test API User's Guide (Document ID #081470), Rev 22 for more details.

1.0 REVISION SUMMARY

This is a bug fix and feature addition to revision P1.3.1 of the Le890SLVVP software. *This release replaces all previous release.*

This release provides a complete set of the available VeriVoice Professional tests as described in Table 2-2 of the LT-API User's Guide.

PLEASE READ THE FOLLOWING CAREFULLY

This release is compatible with the following VP-API-II release packages:

- LE71SK0002 P2.17.0 to P2.23.0
- LE71SDKAPIL P2.17.0 to P2.23.0

2.0 SOURCE FILES

The release package has the following file/folder structure:

- **`\ReadMe.txt`** - High level installation instructions.
- **`\api_lib\vp890_api`** - VE890 VP-API-II extension source files (primitives).
- **`\lt_api\common`** - LT-API interface implementation files.
- **`\lt_api\documents`** - LT-API User's Guide and this document.
- **`\lt_api\includes`** - LT-API interface definition source files.
- **`\lt_api\vp890_lt`** - LT-API interface definition source files.

Details pertaining to the source files can be found in the LT-API User's Guide section 1.3.

All source files were updated to replace the Zarlink Copyright notice with the Microsemi Copyright notice.

3.0 CORRECTED ERRATA FROM P1.3.1

C1 Prevent VP-API ring cadencer from interfering with the Ringing Self Test (`LT_TID_RINGING_ST`) . If an application configured a line to use a ringing cadence, the VP-API would enable the cadence during the Ringing Self Test and cause measurements to be taken during the silent period of the cadence rather than when ringing was applied to the line. The issue would manifest itself as corrupted ringing self test results.

C2 Prevent large longitudinal capacitive impedances from causing the Line Voltage (`LT_TID_LINE_V`) test to report false Tip to Ground (`vDcTip`) or Ring to Ground (`vDcRing`) voltages.

C3 Corrected a Ringing Self Test (`LT_TID_RINGING_ST`) uninitialized internal variable. In applications that do not initialize stack memory to 0, this uninitialized variable caused the test to abort and report a false `LT_RINGING_STM_OFF_HOOK` result.

C4 Prevent Receiver Off-Hook (`LT_TID_ROH`) test from incorrectly reporting off-hook phones with a low impedance as a resistive loop (`LT_ROHM_RES_LOOP`).

C5 Corrected a Ringer Equivalence Number (REN) test issue in polarity reversal. Starting either electronic ringers test (`LT_RINGER_ELECTRONIC_PHNE_TEST or LT_RINGER_ELECTRONIC_PHNE_TEST_3_ELE`) in any VP-API-II polarity reversal state (`VP_LINE_STANDBY_POLREV, VP_LINE_ACTIVE_POLREV, VP_LINE_OHT_POLREV or VP_LINE_TALK_POLREV)` caused the test to report a differential value of 0 REN regardless of the actual impedance on the line.

4.0 ADDITIONS / FEATURES

C6 Improved accuracy /range of Electronic Ringers Test (`LT_RINGER_ELECTRONIC_PHNE_TEST and LT_RINGER_ELECTRONIC_PHNE_TEST_3_ELE`) measurements in the presences of large longitudinal capacitive impedances.

C7 Improved All GR-909 (`LT_TID_ALL_GR_909`) test duration. Modified test to bypass Ringers Equivalence Number (`LT_TID_RINGERS`) sub test when the Receiver Off-Hook (`LT_TID_ROH`) sub test indicates a `LT_ROHM_OFF_HOOK`.

C8 Updated source files to compile without warnings using modern compilers.

5.0 OPERATIONAL NOTES

N1 **Operational Note:** Customers using VP-API termination type `VP_TERM_FXS_GENERIC` will observe a reduction in the measurable range of the `LT_TID_RD_LOOP_COND` imt and ilg results when running from VP-API line states VP_LINE_STANDBY or VP_LINE_STANDBY_POLREV. The ilg and imt return values will be representative of the feed characteristics in these line states causing ilg to report `LT_MAX_CURRENT` starting at approximately 14mA and imt to report some limited value less than the programed ILA.

N2 **Operational Note:** Customer designs using a CREF capacitor value of less than 4.7uF may experience test failures due to the LtEventHandler() function returning a status of LT_STATUS_ABORTED. These customer's are encouraged to contact Microsemi to obtain a patch for the version of the VP-API-II they are using to prevent these failures.

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