

**SBS-CASE TOOLS™**  
**Version 3.08.0001**  
**9/14/2023**

**This document contains information regarding:**

- Contact information
- General information
- Enhancement list (from prior versions/updates/fixes)

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**General Information:**

Uninstall any prior release of Case Tools, Pathfinder, or the TIP Drivers with the same major and minor version numbers before installing a new release containing the same major and minor version numbers. Releases with a different major and minor number can coexist and don't need to be uninstalled.

**Version 3.08.0001 (from 3.08.0000):**

Enhancements:

CASE-Tools:

- The size of the text boxes has been increased on many of the panels have been changed to display long field names.
- All the nodes in the project explorer tree (such as transactions, panels, labels, rules ...) can now be organized by categories.

- The names of the files stored on disk in the file explorer tree can now be toggled on or off. This will allow the user to either see or hide those names.
- The category names associated with all the nodes (such as transactions, panels, labels, rules ...) in the project explorer can now be toggled on or off. This will allow the user to either see or hide those category names.
- The “remove” function of all the nodes (such as transactions, panels, labels, rules ...) in the project explorer are now shown in ascending sequence by name.
- The compiler has been changed to add extra detail that will be very useful when interfacing to a Toolkit. One purpose of the extra detail is to make use of a REST Interface.

TIP Drivers:

Fixes:

CASE-Tools:

TIP Drivers:

### **Version 3.08.0000 (from 3.07.0002):**

Enhancements:

CASE-Tools:

- The user can now choose the type of database that they would like to store the projects data in that resides in the data collection terminal. The choices for the db’s type are CODEBASE or SQLite. Depending on the type of data collection device you are using, you may or may not have a choice of the db type.
- The user can now choose and Android operating system device as the destination of the data collection terminal.
- Android screen presentations are different than Windows presentations, so full use of proportional options are now available on all widgets that can be defined on a panel.
- The programmer can now select a custom panel size for a mobile data collection terminal. Prior to this release, that option was only available on a Windows PC project.
- A new panel option (available on the panel menu pull down) will convert the layout tabs of a Microsoft panel to an Android panel format. Caution should

be used when performing the convert because an un-do is not available in this release.

- Native SQLite databases do NOT support indexing of a portion of a column. Therefore if the programmer has selected SQLite as the file repository, partial indexes will not be supported for that table as they were in prior releases using CODEBASE.
- An Android font is available for use with the panel designer and debugger.
- Customers that choose to upgrade to 3.8 will be allowed to have versions 3.7 and 3.8 on the same box.
- The compiler was enhanced to generate Android TIP's.
- CASE Tools was migrated to .Net version 4.0. In prior releases of CASE Tools, .Net 3.5 had to be downloaded and installed independently of the CASE Tools install.
- CASE Tools now supports certain event handling gestures for Android devices. You can now have the operator release a panel by swiping up, down, left or right. The operator can also release the panel by depressing the "back" button. All the function keys that were supported in prior releases are now also supported on Android.
- The emulator now has support for 12 function keys and all 5 events by use of a simple pull-down menu.
- The ground work has been created to support the new Loftware/Niceware label printing solution.
- The ground work has been created to support both a SQLite buffer area as well as a cursor area for each table created.
- The user can now choose and Android operating system device as the destination for the data collection terminal.
- Android screen presentations are different than Windows presentations, so full use of proportional options are now available on all widgets that can be defined on a panel.
- The programmer can now select a custom panel size for a mobile data collection terminal. Prior to this release, that option was only available on a Windows PC project.

#### TIP Drivers:

- A new Android TIP driver was written. It makes use of Microsoft's Xamerion product. The configuration and the interface to the new 3.8.0 TIP driver is entirely different than the prior 3.7.x TIP drivers.
  - To install the Android TIP driver, follow the instructions found at <https://www.sentinelbusinessservices.com/index.php/tips-tricks/tip-drivers/android-td-install-2>.
  - To use the Android TIP driver interface to configure, download or run TIPS follow the instruction found at <https://www.sentinelbusinessservices.com/index.php/tips-tricks/tip-drivers/android-td-config>.
- A new Windows PC Tip Driver was created that supports SQLite db's.

- Android devices to support SQLite db
- New Pathfinder interface to support Android functionality
- Multiple application TIPS that are used on the same data collection device no longer require a separate seat for each application. Seats are now allocated by each data collection device regardless of the number of application TIPS that are present on it.
- The TIP running on an Android device will now require a Pathfinder Android seat.
- Support for SLOG (step logging) for TIP driver debugging
- TIP Driver boot menu can create desktop shortcut if desired.
- The view of text on a panel can be made smaller or larger (text ratio) based upon a configuration parameter.
- The Android TIP Driver now supports certain event handling gestures for Android devices. You can now have the operator release a panel by swiping up, down, left or right. The operator can also release the panel by depressing the “back” button. All the function keys that were supported in prior releases are now also supported on Android.
- The TIP Driver boot menu can now point to a start up TIP. This allows the operator to start the TIP application without any user intervention.

#### Fixes:

##### CASE-Tools:

- The panel designer would allow a user to have more than 9,999 widgets defined in a single project. At execution time it would abend with a Run Time Error.
- The label printing interface would allow the user to enter a printer name of more than 25 characters, but at print time the name was truncated to 25 positions. The product now checks for a maximum of 25 characters for a printer name.
- The label printing interface would allow the user to send more than 3000 characters to the label but the label would not print properly. The product now checks for a maximum of 3,000 characters to be sent to the label.

##### TIP Drivers:

- The closing of a COM port when using the Windows PC TIP driver.

#### **Version 3.07.0002 (from 3.07.0001):**

#### Enhancements:

#### CASE-Tools:

- The following changes were made to accommodate a future Android TIP Driver.
  - The device selection was changed from a manufacturer/OS selection to a Screen Size and Operating System selection. The entire concept of screen panels is different in Android.
  - The compiler now adds the column and file names to the TIP instead of compressed column names. This is to support SQLite functionality instead of Codebase.

#### TIP Drivers:

- The following changes were made to accommodate a future Android TIP Driver.
  - The entire TIP Driver was converted from VB.Net to C#. This is the first major step in creating an Android TIP Driver.
  - The TIP Driver recognizes that column and file names are in the TIP to support SQLite.
- The copying of the CASE Tools to Driver Interface db is copied to each user profile if a newer one exists.
- Use of a different icon for the tip driver executable and its configuration file.

#### Fixes:

##### CASE-Tools:

- It GUI editor would allow you to define more than 9 parameters to pass to a subroutine. At execution time it would abend with Run Time Error "340".
- The wizard for the local file transfer did not have "Successful" in the list of error codes to choose from

##### TIP Drivers:

- The value for "file not found" (009) was being reported as a "communications error" (004) ONLY on a Local File Transfer. All other transfers were reported correctly.
- When a panel times out on a Janam Win Mobile device the TIP Driver didn't returned a value of "time out" in the panel action.
- When a label is sent to the resource and the resource drops the file an error "No connection to Pathfinder, can not receive" is returned. The TIP Driver thought that it didn't work but it really did.
- When the Update Value for No Match is specified on an update and that value is the Update Destination value, it works in the debugger but in the TIP Driver it spaces out that field. If you don't specify a value, it works properly in both the debugger and the TIP Driver. .

- When moving a literal to a tag value above 5 in a dynamic selection list some controls literals on the panel were overlaid with the tag values.
- Rounding on the division instruction was always rounding down in the TIP Driver but rounding properly in the debugger.
- When creating a new tip configuration using the TIP Driver and you click "download" to fetch the new tip, the "Object Reference not set to an instance of an object" error occurs,
- When starting in position 10 looking backwards for an "RE" in "QWERTY", it always returned 00000000 which means that the string is not found. Turns out that when you use a length of 6 and not 10 it works. 10 works in the TIP driver but not debugger. In debugger it has to be the length of the data and not the field. In TIP driver, it is the field. It was fixed so that they both work with the length of the field.
- The BU Battery and the Battery % was not being set correctly. It was showing as 0%.
- The Host Port IP Address was returned differently in the debugger then it was in the actual device. It will now be returned as a 5 digit numeric value.

**Version 3.07.0001 (from 3.07.0000):**

Enhancements:

CASE-Tools:

- A length function was added. There were always ways to determine the length of a field in previous releases but with this version you can query the largest number of characters that a field will hold as well as the number of characters that this field is currently occupying. For example, if a field was defined as 5 characters long and its current value is 567. Then the max length is 5 and the current field length is 3.
- Version Control - Ability to ask if the version changed. Prior versions would always perform a version control if the version on the data collection device was different then the version imported to Pathfinder. This change allows you to query and find out if a new version is available and if so you can download it when you wish to. Many customers wanted to ask the operator if this was a good time to perform the upgrade if one was available.
- Ability to have word wrap into text box as well as a label. The existing behavior moves characters off the screen to the left as they are being entered on the right side of the text box.

- Send a Panel without actually showing it. It will allow changing of attributes of controls on a panel without the user seeing blinking.
- Ability to run a WAV file in the Debugger. WAV files always ran in the device but not the Debugger.

#### TIP Drivers:

- Queued records don't come up automatically if a data collection device is sitting at a prompt. This situation occurred back in the 3.6 versions which put total control of queuing into the hands of the programmer, which broke compatibility with prior versions. This change not only restores compatibility but also allows the programmer complete manual control as well.
- The queue file is stored in non volatile memory which will retain your data after a warm or cold boot. The data will be lost if you do a reset to factory settings which wipes in the entire device.
- Ability for 1 project to call another under programmer control. The user no longer needs to leave the application and then start the new application.
- Symbol/Motorola/Zebra TIP Driver ( MC75or MC55) running win mobile 6.5.

#### Fixes:

##### CASE-Tools:

- If the user sets up a rule without a rule validation, the rule will not be accepted.

##### TIP Drivers:

- If a rule is found with no validations it will be ignored. Prior versions terminated abnormally.

### **Version 3.07.0000 (from 3.06.0003):**

#### Enhancements:

##### CASE-Tools:

- Rebranding CASE-Tools to Sentinel Business Services, LLC (SBS).
- Several new System.ErrorNumber constants have been added. Be sure to review an error handling code and ensure proper behavior.
- The behavior of the local queuing option of the Execute Transaction instruction has changed. While transaction sent while off-line or out-of-range are still queued automatically, the CASE developer is responsible for electing to relieve the queue at the desired point in the application. New Action instructions and System variables have been added to support this. Note that

queued records are still attempted to be sent prior to every Execute Transaction, this behavior remains unchanged.

#### TIP Drivers:

- Support for Janam Technologies devices.
- TIP Driver now better supports multiple TIP Programs present on the same device by utilizing TIP program “home” folders. Each TIP program, and all related configuration and data files, should reside in their own separate folder. The TIP configuration menu will create these for you automatically when you add a new TIP program profile.
- The TIP Driver now supports directly launching a configured TIP profile by tapping / double tapping (dependent upon OS) on the .tip file (or a shortcut to that file). This replaces the use of a countdown timer to auto run a TIP from the configuration screen.

#### Fixes:

##### CASE-Tools:

- The pinning (Panel layout) on a drop down gets lost. It isn't saved from run to run.
- The GO To will only allow you to enter a label of 10 characters.
- Case problem on panels when case is changed and panel instruction was already programmed.

### **Version 3.06.0003 (from 3.06.0002):**

#### Enhancements:

##### CASE-Tools:

- Label word-wrap is now supported.
- Resizable screen layouts are now supported.
- Delimited batch file uploads and downloads are now supported.
- New communication-oriented Actions have been added (Connect, Disconnect).

#### TIP Drivers:



- Rewrite to improve screen performance and to consolidate the differing device implementations.

Fixes:

CASE-Tools:

- System and project-level color defaults for some controls did not get applied or saved correctly. This has been fixed.
- The FileFilter instruction did not correctly handle a using text-comparison when defining the filter criteria. This has been fixed.

### **Version 3.06.0002 (from 3.06.0001):**

Fixes:

CASE-Tools:

- Color selection dropdowns used in the Panel Designer could include a uninitialized entry, which displayed and random or garbled text. This has been fixed.
- When debugging the “Execute Transaction” instruction, it did not prompt for simulated user input for all types of transactions. This has been fixed.

### **Version 3.06.0001 (from 3.06.0000):**

Enhancements:

CASE-Tools:

- Support for Windows CE 6 Motorola MC3100 series devices added

Fixes:

CASE-Tools:

- Rounded button did not set all starting colors to “Default to Project” for new controls. This has been fixed.

### **Version 3.06.0001 (from 3.06.0000):**

Fixes:

CASE-Tools:

- Better support for Intermec Windows Mobile 6.5 192DPI devices.

### **Version 3.06.0000 (from 3.05.0004):**

Enhancements:

CASE-Tools:

- Debugger supports a real-time connection to Pathfinder
- Support for Windows Mobile 6.5 high DPI VGA devices added
- Rounded Button control added
- A wider range of colors as has been added
- Panel background color can be set directly
- The Panel caption can be set on a project-wide or per-panel basis.
- Default colors can be set at the Project level
- Double-click events of FileView and List controls have been mapped to triggering a Panel Action when permitted by the OS.
- Battery and Backup Battery system variables have been added.
- ProgramDir and DriverDir system variables have been added.
- CurrentSubroutine and CallingSubroutine system variables have been added.
- The maximum file index size has been increased to 240 bytes.
- The maximum size of most object and variable names has been increased to 32 positions.

### **Version 3.05.0002 (from 3.05.0001):**

Fixes:

CASE-Tools:

- In the debugger, the Execute Transaction instruction did not prompt for simulated server data for all types of transactions. This has been fixed.

### **Version 3.05.0001 (from 3.05.0000):**

Fixes:

CASE-Tools:

- Fixed crash that sometimes happened when using the Find feature while debugger is running.

- Fixed bug where the Save dialog could get locked if it displayed while CASE-Tools was minimized.
- Fixed compiler bug that happened when the Execute Transaction instruction did not use the Specify Max Rows option.
- Updated Signature Capture and Date Picker icons
- Fixed crash compiling Execute Transaction that did not target files.
- File I/O instruction would throw an error if no File Action was selected
- Destination File was not being validate in the File Filter instruction.

TIP Drivers:

- Fixed bug in TIP Drivers where files created by File Filter were not flushed properly

**Version 3.05.0000 (from 3.04.0002):**

Enhancements:

CASE-Tools:

- Signature Capture control added
- Date Picker control added
- Function Key Processing added
- Download processing enhanced – File Full notification
- Maximum instructions per subroutine increased from 999 to 9999

TIP Driver:

- HTTP communication mode added to TIP Drivers
- Ability to specify an icon for Windows TIP Drivers
- Enhanced startup menu for Windows TIP Driver

**Version 3.04.0002 (from 3.04.0001):**

Enhancements:

SBS-CASE Tools:

- Images are now clickable.
- Increased max number of files to 255
- Added support for two new Date formats.
- Added summary view to source file output to aid in diagnostics and source-control.
- Added support for the MK4000.

Fixes:

SBS-CASE Tools:

- Some permutations of drop-downs and file options did not populate/refresh the screen correctly.
- Some graphical settings were not handling load from disk when there was no prior GUI settings information (like an upgrade from a prior version)
- Fixed a bug/crash with REMing out the Begin/End instructions.

### **Version 3.04.0001 (from 3.04.0000):**

Enhancements:

SBS-CASE Tools:

- Project files now track the authoring CASE-Tools version down to the service-pack level.
- Opening a project authored in a higher-version of CASE-Tools now warns the user.
- Cleaned up File I/O dialog
- Unified database library between debugger and TIP Driver

Fixes:

SBS-CASE Tools:

- Now support case-insensitive compare when searching
- Now supports the length tooltip on Panel fields
- Pasting variables now flags the source file as dirty
- Better handling for project files passed on the command line
- Move BOF is always a valid, regardless if the file is empty
- Image controls with a dynamically loaded image would sometimes get its image cleared between Panels
- Fixed a bug that could cause a file EOF to get signaled erroneously. This occasionally affected interaction with the FileViewer control.

### **Version 3.04.0000 (from 3.03.0000):**

Enhancement list:

#### ICE and Mobile Developer:

- Windows Vista and Windows Terminal Server support added.
- Compile of .tip defaults to the Project folder.
- Filter instruction added.
- Windows (Desktop) device type supports custom designer size.
- Panel designer enhanced to better support changes to device screen size.
- Date/Time of last compile is now recorded.
- Debug trace file is now stored in the Project directory.
- Windows (Desktop) debugger emulator supports Minimize, Maximize, and Resize.
- Debugger graphical MsgBox behavior changed to Append w/ Space each additional message field.
- CASE-Tools now supports the inclusion of Read-Only files as part of a Project.
- Added the ability to create a non-default tab ordering.
- The Project Explorer now denotes Read-Only source files with an alternate color.
- Improved Bookmark functionality
- Improved Find/Find Next functionality
- The colors used on Show Panel instruction have been changed to better deal with alternate OS themes.
- A TabOrder column has been added to the display in Panel view.
- The debug File Contents Viewer now sorts the available files.
- Improved support for Cut/Copy/Paste within the Variable Wizard control.

#### TIP Drivers:

- Added File Filter instruction.
- Windows TIP Driver changed to accommodate multiple users. Configuration files are now paired with .TIP file within the same directory.
- Changed method of getting unique device id so that all terminals use the same method.
- Added marshal of BarcodeSymbology to textbox control - not just marshal from control.
- Made BarcodeSymbology property read/write instead of read-only.
- Added support for variable size forms in Windows TIP Driver.
- Moved to Symbol SDK ver 1.7 (Symbol devices only)
- Changed formatting of MsgBox text to eliminate leading space that was being pre-pended.
- Added support to position File Viewer for non-Windows TIP Drivers. This feature was previously supported only in the Windows TIP Driver.
- Added support to keep selected item visible in FileView control.

#### Fixes:

#### SBS-CASE Tools:

- The debug File Contents Viewer would render very slow for some files, particularly for files with many columns and rows. This has been fixed.
- Renaming a File with an Index always invalidated the Index. This has been fixed.
- In the past, saving a CASE-Tools project updated all of the project files regardless if the file had changed. This has been fixed.
- In some cases, the Variable Wizard controls would not refresh correctly if the variables were added or deleted after it was shown. This has been fixed.
- Not all types of variables reported their length in the Variable Wizard tooltip. This has been fixed.
- While debugging, deleting rows from a File that had an attached FileViewer could cause a crash. This has been fixed.
- Double-clicking a variable icon in the Variable Wizard control invokes the Variable Browser screen, but could sometime also change the selection to a different value. This has been fixed.

#### TIP Driver:

- Fixed a bug in the Database RecordNum routine to handle EOF.

#### **Version 3.03.0000 (from 3.02.0000):**

##### Enhancement list:

##### ICE and Mobile Developer:

- Support for Colors and Fonts in Labels, Textboxes, Buttons, Dropdowns, Boxes/Lines, File Viewers, and Images.
- Warning displayed when upgrading a CASE Program from an older version.

#### **Version 3.02.0000 (from 3.01.0001):**

##### Enhancement list:

##### ICE and Mobile Developer:

- Support for the Intermec CK31 was added.
- Support for the Intermec CN2 was added.
- Display font point size was increased for the MC3000.
- Number of rows allowed in a file was increased to 99,999.

- Ability to programmatically access some of the communications settings, including Host IP Address, was added.

#### TIP Drivers:

- Ability to change Host Name and Host Port via variables.
- ActiveSync communication mode.
- Enhanced File Viewer to increase load speed.
- Dropdown list of .TIP Files on Configuration Screens.
- Auto-start feature.
- Version Control now uses TIP Name from Configuration File rather than TIP Header.
- XP TIP Driver form is now sizeable.
- Sound support added for Symbol and Intermec CE Devices.

#### Fixes:

##### ICE and Mobile Developer:

- In “Browse Variables” and “Browse Constants” dialog, entering certain characters into the MRU list cause a crash.
- The selection in the Fileview control could be displayed scrolled off the screen.
- Projects containing List or Dropdown controls with a large amount of items caused the IDE to slow down.
- Text-device (Antares) screen designer always reported an error when launched.
- Global and Local variables with subfields (aka structures) could cause crashes in the development environment. This could happen when launching or exiting the variable editor, during compilation, or when starting the debugger. Specifically, editing such a variable and selecting "Cancel" would create duplicate subfields.
- Instructions referencing variables that do not exist in the Project could cause a crash or other erroneous behavior.
- Instruction referring to control-based variables on a Panel that was subsequently removed would throw an error.
- The Intermec CN2 device was incorrectly flagged in some places as a text-based device. This caused various problems including crashes at compile-time.
- The File Transfer instruction could fail in the debugger in some cases if the Debug File Name was padded with extraneous spaces.

#### TIP Drivers:

- Fixed bug in File Viewer where trailing spaces were not being trimmed.
- Changed communication to Pathfinder/Mobile Tag to include unique Terminal ID.
- Fixed bug a where some transactions caused a disconnect.
- Button widget text is now trimmed before display.

**Version 3.01.0001 (from 3.01.0000):**

Enhancement list:

ICE and Mobile Developer:

- Support for variable timeout in the Show Panel Instruction.

Pathfinder and Mobile Tag:

- Ability to run Pathfinder/Mobile Tag as a Service.
- Ability to bind to a local IP address other than the system default.

Fixes:

ICE and Mobile Developer:

- The correct default save directory for a project was not always being used.
- In the PPC emulator, the Selected Item and Selected Index could get out of sync.
- Label alignment was erroneously getting changed during a Show Panel Instruction if the “Reset All Fields” option was selected.
- Clearing a file (via the File I/O Instruction) did not mark the file as modified, causing associated FileView controls not to be refreshed.
- Debugging a Local File Transfer Instruction fail due to padded spaces in the path.
- In the Panel Designer, deleting a control while it was being dragged caused an error.

TIP Drivers:

- Support for variable timeout in the Show Panel Instruction.
- Fixed flushing problem on RS/232 (serial) Instruction execution.

**Version 3.01.0000 (from 3.00.0000):**

Enhancement list:



#### ICE and TIP Drivers:

- Support of the Symbol MC50 under Pocket PC.
- Support of the Symbol MC3000 under Win CE.
- A new control type of Image is now supported.
- Option to Reset Field on Show Panel has been added.
- All top level objects in CASE Tools can now be cloned (subroutine Files, Transactions, Label Definitions, Panels).
- Text Message Box Instruction now validates its size against small device screens.
- Graphical Message Box now has addition fields to build the message more easily.
- XP TIP Driver now supports Auto Start.
- XP TIP Driver now allows minimize.
- Graphical TIP Drivers now support Host Name as an alternative to IP Address.

#### TIP Drivers:

- Support for record blocking on all types of downloads improving performance.

#### Fixes:

##### ICE and Mobile Developer:

- The Debugger File Viewer dialog can fail to display the file contents for graphical devices if deleted records existed.
- The Debugger File Viewer could sometimes report stale data. File data is now flushed before the Debugger File Viewer is invoked.
- Timeouts in Entry/Prompt instructions did not always get handled correctly.
- A memory leak in the Debugger caused CASE Tools to crash if a graphical program that used files was run repeatedly.
- Z-order (stacking of overlapping controls) was not persisted correctly in the Panel Designer.

#### TIP Drivers:

- Miscellaneous bug fixes regarding communications including extraneous time syncs that negatively affected performance.

### **Version 3.00.0000 (from 2.03.0000):**

#### Enhancement list:

General:

- Product Line split into 2 versions, Case Tools & Pathfinder Gold and Mobile Developer & Mobile Tag

Mobile Developer:

- RFID I/O Instruction added and supported.

TIP Drivers:

- TIP Version Control now supported on all devices.
- RFID support for Intermec 700 (IP3) and Generic XP
- New 3.0 SBS Graphics
- Added code to suppress multiple instances of TIP Driver (except CK30).

Fixes:

ICE and Mobile Developer:

- The Z-Order of Control on a Panel was not being maintained correctly.
- The order of keyboard navigation in the Panel Designer was not always correct.

TIP Drivers:

- In Generic XP Fileviewer incorrectly allowed Multiselection
- In XP & CK30 – RS/232 Send Timeout was too short.
- Fixed Terminal Name Case Sensitive in some transactions.
- Doubled timeout waiting for “Clear” message.
- Added code to help release Message Box Resources.
- On Move BOF (File I/O), clear buffer to spaces.
- In XP – File I/O fix in File Path.

**Version 2.03.0000 (from 2.02.0000):**

Enhancement list:

ICE and ICE TIP Drivers:

- Support for the FileView Control.
- Navigation links have been added to the right-click menu of some Instructions.
- Validation and handling of the Show Panel Instruction has been improved with regard to references to controls that no longer exist.

- File Downloads and Transaction Downloads are now transmitted in blocks to increase efficiency over slow connections.
- The Debugger now supports both Antares and Pocket PC file structures. Previously, it emulated Pockets PC files using the Antares structure.

Fixes:

ICE:

- Adding a previously created Rule to a new Project failed.
- The Project Explorer vertical splitter bar could move unexpectedly when the main application window resized.
- On File Downloads or Transaction Downloads of more than 10,000 records, an failure could occur.
- The tab order has been corrected on the Toolkit Resource configuration screen.
- The Debugger allowed the SelectedItem of a Dropdown to be displayed even if the item didn't exist in the list.

### **Version 2.02.0000 (from 2.01.0001):**

Enhancement list:

ICE and ICE TIP Drivers:

- New Devices Supported - Intermec Pocket PC 2003, Symbol MC9000 Pocket PC 2003, Intermec CK30 WinCE 4.2, Desktop PC – XP
- Added ACTION Instruction with Sleep Command and User Time Sync
- Added Ignore Trailing Spaces to IF, ELSEIF, and WHILE Instructions.
- Enhanced Panel Designer: Resizable to accommodate a wider range of screen sizes, displays information about current selection, pixel-level manipulation of size and position of controls.
- Added “Selected Item Data” and “Tags” to List Box and Dropdown Widgets.
- Added Ability to bring up SIP (screen keyboard)
- Added option to exit program to Operating System or Bootstrap
- Added CK30C-specific Message Box and Status Box in the Emulator. It was previously using the Pocket PC style.

ICE TIP Drivers:

- Added Version Information to Antares.

Fixes:

ICE:

- FOR / NEXT problem corrected to handle the condition where the programmer changes values within the loop.
- For Antares devices, compiling a program that used “Call Sub” or “Call Sun and Continue” in an Entry Instruction function key action caused an error.
- In both the SQL Tester and in the ODBC non-Select SQL statements that used nested Select statements could affect too few rows than they otherwise should have. (Note – The problem described applied to MS SQL Server and did not occur when using stored procedures).
- The Show Panel Instruction could throw an error if it referenced a panel that was subsequently deleted from the project.

ICE TIP Drivers:

- Problems when SIPState was set to an invalid value.

**Version 2.01.0001 (from 2.01.0000):**

Enhancement list:

ICE:

- Some optimizations regarding the passing of literals as parameters have been made in the compiler.
- When moving from Version 1.4 to 2.1, the automatic upgrade has been improved.

Fixes:

ICE:

- If the ICE startup routine called subroutines with parameters, in some situations errors would result in the device.
- Help files have been updated.
- For text based devices, the Call Sub and Call Sub Continue did not properly allocate temporary data used for parameters causing abnormal termination in the device.
- The Call Sub instruction could raise an error in some cases.

ICE TIP Drivers:

- For text-based devices, the Call Sub and Call Sub Continue function key action was not functioning properly in the device.
- Intermec Antares devices reported incorrect error codes.

### **Version 2.01.0000 (from 2.00.0000):**

Enhancement list:

ICE:

- Added support for Rules, Validation, and Re-edit.
- Added functionality to the Textbox Control including scanner support.
- Re-ordering of data sub fields is now supported.
- Added .NET Function instruction.
- Added two string concatenation functions to the Function Instruction.
- Numerous GUI Enhancements.
- Show Panel Instruction has been modified to support automatic validation on field exit for button press (“satisfy if valid”) panel action.
- Ability to clone (via right click menu) controls on a panel.

ICE TIP Drivers:

- Requests to upload a zero row file were previously ignored, but are now allowed.
- Alternative file location for ICE data files is now supported.
- New Driver Configuration Menu.
- Ability to download TIP Files from Configuration Menu.
- Installation of Pocket PC Drivers using a .CAB File.

### **Version 2.00.0000 (from 1.04.0003):**

Enhancement list:

ICE:

- Initial Version of ICE with Graphics.

Fixes:

ICE:

- Debugger test data associated with each Execute Transaction instruction was getting copied and posted along with the instruction.
- Validation procedures were improved in several places.
- Improved reported errors during edit, check, and compile. All error types are now consistent.

- Use of “copy from...” option when creating a structure could cause the structure to be lost.
- Debugger now correctly reverses color on text status message boxes.
- When editing an existing Function Instruction focus now goes to the second (arguments) tab.
- Variable selection control and variable browser dialog have been improved.
- Compiler improperly handled some variable to parameter mappings.
- CONSTANT.ERROR has been added to enumerate all ICE errors, and the other error constants have been reconciled against this list.
- System.ErrNumber and System.ErrDescript have been replaced with System.ErrorNumber and System.ErrorText, respectively.
- System.ErrorNumber uses the new CONSTANT.ERROR constants and system.ErrorText has been increased to 255 characters.
- Support for Pocket PC 200x added.

#### **Version 1.04.0003 (from 1.04.0002):**

Fixes:

ICE/Drivers:

- ‘Call Sub + Continue’ Function Key Action was not performing call.
- Under certain circumstances involving negative numbers and fixed decimals, floating point arithmetic could yield erroneous results.

#### **Version 1.04.0002 (from 1.04.0001):**

Fixes:

ICE

- Potential memory corruption problem that could occur in low memory situations.
- Projects launched by double-clicking a .C\_P file were not correctly using the directory that file came from.
- Colors displayed in the debugger’s terminal screen did not always handle reverse-video correctly.
- Enable/Disable REM Instruction rules were not always applied correctly to old projects.

#### **Version 1.04.0001 (from 1.04.0000):**

Fixes:

ICE:

- In Time Display, 2 position years were displayed as 4 position years.
- If there was a commented (remarked) out line after any FOR/NEXT Loop, the program might terminate abnormally.
- Flowcharter did not begin execution properly

### **Version 1.04.0000 (from 1.03.0000):**

Enhancement list:

ICE:

- Version Control Instructions.
- System variables ICEVersion, ProjectVersion and TIPVersion have been replaced with ProgramVersion and DriverVersion.
- Support for Digital Input/Digital Output (DI/DO) has been added via the new system variables Sensor and Relay.
- Drag and Drop support in the SQL editor has been improved.
- Additional/Enhanced samples programs: AMS Alpha Display (simple display), Direct Label Print enhancements, and Toolkit sample now supports email.

Fixes:

ICE:

- The screen sizes indicted in ICE for the Intermec 2481 and 2486 did not match the default font of the drive.
- Find Text failed to match the fields of an Execute Transaction Instruction.
- REMed out labels could erroneously cause a “duplicate label” error.
- Use of Clear Lines Before or Clear Screen Before options of the Entry Instruction could use the wrong color in certain circumstances.
- Under certain Operating Systems and project locations, launching SBS-ICE Design via the project file (.c\_p) did not always work.
- Add existing transaction did not work for Toolkit Transactions.
- Debugger Data Tree and Data Viewer/Patcher have been corrected to handle variables with embedded NULL characters.
- The debugger failed to initialize when debugging projects with files located in deeply nested directories.
- In Entry Instruction, Default to Last could cause problems under certain circumstances.

## **Version 1.03.0000 (from 1.02.0001):**

Enhancement list::

ICE:

- New Demonstration Mode – See README\_DEMO.RTF. Additional functionality has been added to demo mode. In ICE you can now compile programs in demo mode with the only restriction being the compilation of External Function Instructions.
- In ICE, numeric values for low/high range checking in the Entry Instruction, have been expanded from 9 to 12 positions.
- The entire SBS-CASE Tools Enterprise Suite now places itself on the Start Menu/Programs Panel as SBS-CASE Tools Enterprise Suitev1.3. This is different from its last placement within Sentinel Business Solutions. We have done this to facilitate keeping multiple versions of our product on the same machine.

Fixes:

ICE:

- Globally scoped variables that were passed to a subroutine in a read-only parameter reflected any subsequent changes to the original global variable.
- The validations around the REMing-out of instructions (disable/enable block) failed to address all possible sources of errors. New REM rules are now in place to prevent invalid program structures from occurring.
- The last literal anywhere within an ICE program could be damaged (eg.last character lost).
- If an instruction was added to the end of a subroutine, and it required internal ICE validation, it could be lost.
- Path names longer than 256 characters were a problem. Limit has been increased to 512.
- If there was a commented out instruction right after a Loop Instruction, the Break within the loop could fail.

ICE TIP DRIVER:

- In the Time Display Instruction, abbreviated day-of-week names were sometimes being displayed as full day names (Fri vs. FRIDAY).
- Function Key action of Enter Literal that inserted a literal that was longer than the entry field caused execution in the device to be unpredictable.



- Downloads to ICE files sometimes displayed a download record count of one more than actually downloaded. Additionally, the File Count variable would be off by one cases.
- During downloads to the terminal, shorter than expected records could cause unpredictable data to be placed in the download buffer/file.
- Downloads of greater than 9999 records were not handled correctly. The file length was truncated to 4 positions (eg. 11000 requested only downloaded 1100).
- On Pocket PC Systems, terminal files were corrupted on certain occasions during download. The unit reported errors or it sometimes locked up.
- In File I/O Write, clear row after insert was not being executed.

**Version 1.02.0001 (from 1.02.0000):**

Fixes:

ICE:

- In the debugger, execution of an Execute Transaction Instruction with a result type of Multiple caused an error when reading the debug data file.
- Debugger would not display the Time Display Instruction if only the month was enabled.

**Version 1.02.0000 (from 1.01.0002):**

Enhancement list:

ICE:

- New Local File I/O and Local File Transfer instructions added.
- New Serial I/O(RS/232) and Serial Configuration Instructions added.
- Terminal Name has been added as a System Variable.
- The Label Specifier of a Label Definition can be over ridden during printing using the new Label Specifier field in the Print Label Instruction.
- Breakpoints and Bookmarks are now persisted in the subroutine source files.
- The Data Tree is now sorted alphabetically.

Fixes:

ICE:

- An Error occurred in the editing of a Prompt and Entry Instruction when a non-supported color was set.
- Error dialog did not always correctly identify the source of an error.
- When assigning data to a variable, excluding a Move Instruction, the debugger did not always handle smaller to larger variable assignments correctly.
- A comma in the Initial Value or Remark of a structure subfield caused it to be read incorrectly from the source file.
- “Recent Projects” view when opening an existing project uses wider columns (the path was being truncated).
- Leading and trailing spaces are now trimmed from the Label Name of the Label Instruction.
- The debugger did not correctly set the color of an Entry Instruction with its Prompt disabled.
- The default Stack Size and Code Page size have been increased.
- “Add Existing File” for ICE Files did not work.
- File indexes were not validating their keys.
- In the Call Subroutine Instruction, a bad mid-string was not getting caught during validation.
- In the Call Subroutine Instruction the validations on Parameter/Argument Lengths have been loosened. Now the only restriction is that writable (non-read only) variables mapped to writable parameters must match in length.
- The Execute Transaction debugger dialog no longer requires fixed length records for the debug file data.
- While saving/restoring projects, empty properties were not always correctly handled.

**Version 1.01.0002 (from 1.01.0001):**

Enhancement list:

ICE:

- Support for Intermec 700 Series Terminals.

Fixes:

ICE:

- In Function Instruction, the operand information for Format Number was incorrect
- Under certain circumstances the debugger incorrectly executed the Break Instruction.
- Under certain circumstances the compiler would erroneously generate a Break outside For/While error.
- The debugger was not correctly handling the Entry and Message Box timeout.

- The validation of a File I/O Instruction caused an error when the target file doesn't exist and the I/O action required an index.

### **Version 1.01.0001 (from 1.01.0000):**

Enhancement list:

ICE:

- The ICE Debugger menu shows the ESC key as break
- Additional Samples – Inventory, Pack & Print, and Work in Progress.
- Added Toolkit Sample.
- Updated Help Files.

Fixes:

ICE:

- Misc. display fixes.
- Subroutine call > 9 parameters flagged as invalid.
- More than 32 files in a project flagged as invalid.
- Index register usage.
- MsgBox timeout.
- Entry / Prompt copy - paste; clear lines now retained.
- Trims of trailing blanks in subroutine name save.
- Restriction of SQL tester test data
- Label print timeout default now 20 secs.
- File Index key field restricted to 64 max char.
- PC project load shows the function keys.
- Terminal hung up(froze) when an SQL error was returned from ODBC.

### **Version 1.01.0000 (from 1.00.0000):**

Enhancement list:

ICE:

- Socket Host – to send/receive transactional/file information with a TCP/IP Host via socket.
- Label Printing – to permit label printing via Software Label Printer Server.
- Enhanced Tree View of Program components.
- TIP Driver Configuration Menu –Allows user to change various configuration parameters at program startup.

Fixes:

- Proper replacement of cursor state when program ends and user chooses to return to operating system.