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TITAN 10.1.0 CHANGE LOG (RELATIVE TO 10.0.0)

2024-04-25

HIGHLIGHTS

- C++ compiler
  - Bugfixes (592, 695, 703, 705, 707, 708, 709, 710, 711 ,717, 722, 725)
  - Standard uplift (600, 626, 634, 635, 639, 641, 645, 646, 648, 666, 668, 669, 670, 671, 675)
  - PER Encoder (718, 719, 720, 721, 724)
    - Standalone ASN.1 encoder generation (712, 714, 715, 723)
- Eclipse Plug-Ins
  - Bugfixes (515, 516, 517)
- Language Server & NextGen Plug-Ins (VS Code, Theia, LS Eclipse)
  - Bugfixes (12, 14, 15, 22, 28, 30, 31, 32, 33, 35, 37, 39, 40, 41, 42, 43, 45)
  - General stability and robustness improvements
- Usage of WSL2 as Windows alternative

STANDARD UPLIFT

- This effort aims to uplift Titan's TTCN-3 standard compatibility to the latest version
- The current supported language standard is 12 years old
- New development would be hard as old standard versions lack the latest language features

STANDALONE ASN.1 ENCODER

- Titan now supports native ASN.1 PER (Packed Encoding Rules) encoding.
- With this feature anyone can generate ASN.1 defined data structure encode/decode C/C++ code to use in any project requiring the functionality.
- Apart from the new PER encoder feature the other standard encoding rules (BER, OER, PER, XML, json) are also supported in standalone mode
- Next planned phase is to provide code generation for projects in other languages (e.g. Java, C#, etc.)

USAGE OF WSL2 AS WINDOWS ALTERNATIVE

- Having the WSL extension for VS Code makes the work with the Titan toolset quite comfortable. The guide is available here
- According to the Managing extensions section, the Eclipse Titan extension be installed for WSL as well.
- The command line toolset is available directly via the Terminal of VS Code (make sure you have set the necessary environmental variables properly, such as TTCN3_DIR).

SELECTIVE CODE SPLITTING

- Made the -U option (option for code slitting) positing dependent for both makefile_gen and compiler applications
- The ASN.1 or TTCN-3 modules listed after the -U option are split according to the specified mode
- Made the -U option compatible with the '-' (selective code generation feature)

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