

MST Special Track
Latest output & activity of SpecC

Date: Nov. 20th (Tue) 14:00–17:00

Place: Tokyo Fashion Town TFT906

200 seats

application: <http://it.backoffice.co.jp/MST2001/>

By SpecC Technology open Consortium (STOC)

Time Table:

1. 14:00–14:10 **Introduction** STOC chair/Toshiba, Tamaru Kiichiro
2. 14:10–14:40 **SpecC technology Reference Compiler** STOC planning Dept. Kinoshita Tsuneo

SCRC is one implementation of a SpecC Compiler that meets all the rules imposed by the LRM (Language Reference Manual). SCRC is the standard for all other SpecC Compiler. Fully compliant with the LRM, but it is not necessarily optimized for speed or convenience. Every other compiler must be compliant with the SCRC, that is, it must pass the same test bench. So, Test suite (= test bench) is provided. SCRC has been developed by CECS UCI, they would support users of SCRC. STOC promote SpecC Reference Implementation, approves SpecC LRM, and authorizes SCRC development.

3. 14:40–15:10 **Current status of activity for the SpecC ver.2.0**
STOC language specification WG chair/Prof. of Tokyo University, Fujita Masahiro

SpecC LRM ver. 1.0 and its SCRC has been opened now. Language Standardizing Working Group (LSWG) doing work intending to release LRM ver. 2.0 at the beginning of 2002. By clearing the parallel processing or event processing, and also getting contact with Case Study Working Group, Language refine work has been continued. Register Transfer Level designing is also discussing here. In this seminar, feature of SpecC ver.2.0 will be briefly explained.

(15:10–15:20 recess)

4. 15:20–17:00 **Report from STOC case study WG**
–15:30 **Introduction to Case Study WG**
STOC case study WG co-chair/Toshiba, Igarashi Masato
–16:00 Case study 1: **An example of SIO device description by SpecC**
Toyohashi University of Technology, Honda Shinya

This group has been researching design methodology about unified denotation of device driver and devices by SpecC. By the first step of this research, to evaluate the denotation capability of SpecC, SIO device is described by SpecC, and then device driver and device are separated according to the design flow, and then implemented. In this seminar, those SIO device denoted by SpecC will be explained.

- 16:30 Case study 2: **An example of USB device description by SpecC** CATS, Asari Kouji

Case study to describe USB device by SpecC will be reported with encountered problem. In this case, Hardware part and Software part are not definitely separated at SpecC description level, and then actual HW/SW design are implemented.

- 17:00 Case study 3: **Specification transformation from UML(StateChart) to SpecC**
Inter Design Technologies, Iwamasa Mikito

UML is one of standardized description methodology for object oriented analyzed design for software. Currently, embedded software design methodology using UML for its analysis and designing becomes a trend. UML was understood to be good for system analysis and skeleton design level, but not smoothly transfer to lower detail design. In this case study, State Chart of UML which is most related to embedded implementation is focused. It explain the method and case study of transfer from UML to specification written by SpecC. It would highlight the SpecC capability as specification description language by transferring from UML to SpecC.