

SystemC Evolution Day 2021

Welcome and Introduction

Ola Dahl

Organizing team chair

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Organizing team

- Ola Dahl, Ericsson
- Mark Burton, GreenSocs
- Martin Barnasconi, NXP
- Christian Sauer, Cadence
- Peter de Jager, Intel
- Jerome Cornet, STMicroelectronics
- Lynn Garibaldi, Accellera
- Laura LeBlanc, Conference Catalysts

Agenda

Time	Title	Author(s)	Affiliation(s)
8.30-9:00	Welcome and Introduction	Ola Dahl	Ericsson
9:00-10:00	How to Fork Threads in SystemC Just Like in SystemVerilog and Specman-e	Stefan Tiberiu Petre	Independent Verification Consultant
10:00-11:00	Multi-core Debugger Integration and Suspend/Resume	Peter de Jager	Intel Corporation
11:00-12:00	SystemC Community - GitHub, Forums, Web Sites	Martin Barnasconi ¹ Mark Burton ²	¹ Accellera ² GreenSocs
12:00-12:30	Update from Accellera SystemC Working Groups	Martin Barnasconi	Accellera
12:30-13:00	Q&A	All	
13:00-16:00	Virtual Networking		
16:00-17:00	SystemC in Hybrid Simulations	Mark Burton ¹ Martin Barnasconi ²	¹ GreenSocs ² NXP
17:00-18:00	Achieving IC Integrity for SystemC Designs	Vlada Kalinic	OneSpin, A Siemens Business
18.00-18.30	Summary and Concluding Discussion	Ola Dahl	Ericsson

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Virtual Conference

- Conference home page
 - <https://dvcon-eu-virtual.org/>
- SystemC Evolution Day agenda
 - <https://dvcon-eu-virtual.org/presentation/systemc/systemc-evolution-day>
 - Presentations use Zoom (Web-based Zoom and PC client software are supported)
- Virtual Experience Rooms
 - <https://dvcon-eu-virtual.org/hubs>

Presentations / Q&A

- Presentation, followed by Q&A
- When you have a question, raise your hand
- Q during presentations, if Ok for the presenter, e.g.
 - "I stop here, to see if there are any questions so far", or
 - "please ask a question whenever you like"

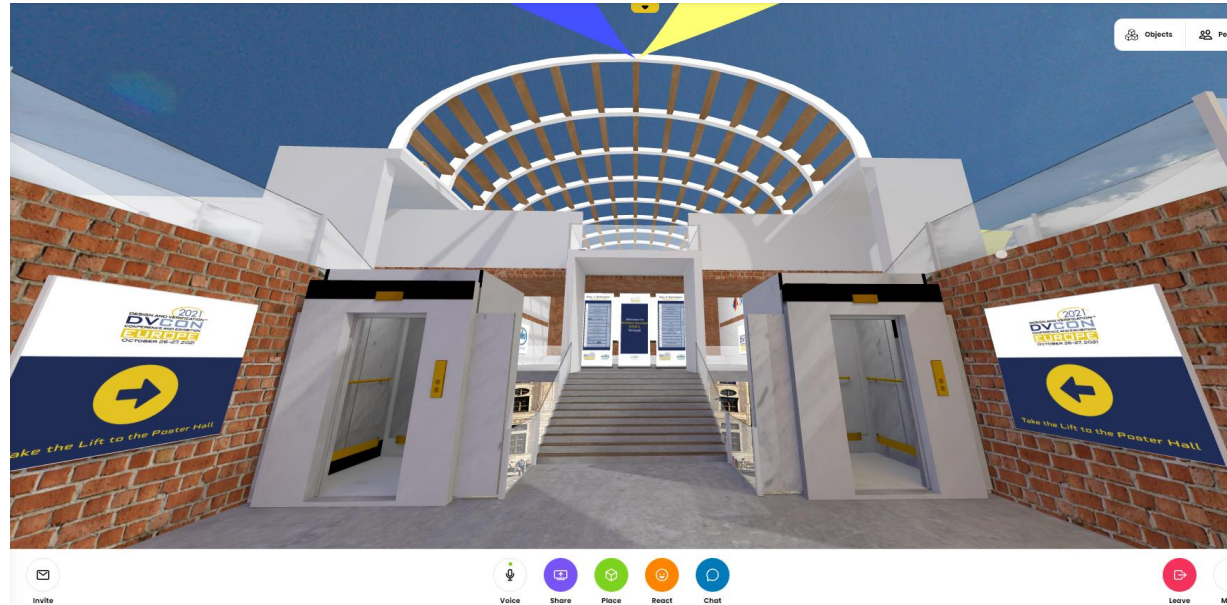
Presentations

Presentations are available at

<https://systemc.org/events/sced2021/>

Speakers: if you have done updates after your submission of final slides, please re-send the slides to us

Virtual networking



<https://dvcon-eu-virtual.org/hubs>

Virtual Experience Rooms - [Instructions](#)

Zoom and the virtual world

Let's meet in hubs for discussions during breaks

- breaks between presentations
- the "big" break, between 1300 and 1600

<https://dvcon-eu-virtual.org/hubs>

Q&A

- Let's meet in hubs around 1330, until 1600
- <https://dvcon-eu-virtual.org/hubs>

Summary and Concluding discussion

Session	Notes
How to Fork threads in SystemC	Aligning SystemC/SystemVerilog/e, Github library, use cases, port methods (generic simplified "b_transport"), proposal for template for SystemC updates (example: sc_vector)
Multi-core debugger integration	Improved handling/control when in "break" state, using sc_pause, need control over sc_main, ideas for how to get away from this, ideas for updates to SystemC, also CCI (the second C, Control) should be supporting this, a proposal for suspend/unsuspend including priority setting, LRM text needs update – baseline for suspend/unsuspend needed, this is connected to a proposal already examined in IEEE context, need for a new state in the simulation engine (SC_SUSPENDED, including callback mechanisms)
SystemC community	systemc.org, active community, forums, public repos, Accellera-controlled repos, the value of being an Accellera member, commercial aspects (e.g. advertising on systemc.org)
SystemC in hybrid simulations	Multi-standard simulation, connecting different standards, feedback wanted, which organization(s) can drive this? A need for prototypes and working examples, The need for an external interface to SystemC, the need for places where functions can be plugged in, choice of abstraction level(s), we need couplings that support higher abstraction levels
Acheiving IC integrity for SystemC designs	SystemC-RTL consistency when using HLS, Scope of SystemC/C++ standard not suitable for guidelines for formal use cases, formal does automated checks of SystemC code, SystemC initialization – e.g. X-state propagation, array checking, race conditions, precision selection in fixed-point

Discussions

- Multi-threading, multi-processing, multi-simulator aspects

What happens now?

- Fikas will continue
- 2 x Fika + 1 SystemC Evolution Day – for 2022
- Next Fika in Q1
- Continue to add info to systemc.org