



Nordic Test Forum

*invites to*

# TestForum 2006

A Nordic forum for exchange of experience and know-how  
within the field of production test of electronics.

Meet colleges and experts, gain knowledge about trends  
and best practices in the area of test of electronics.

Tuesday and Wednesday, November 28<sup>th</sup> and 29<sup>th</sup>, 2006

**Gustavelund Conference Hotel, Tuusula, Finland**



## The Program for TestForum 2006

After many years in different Scandinavian counties, TestForum will for the first time take place in Finland. We have chosen the town of Tuusula close to Helsinki, for its easy access to the Helsinki Vantaa International airport and road access from the capital area. This we have done based on feedback from previous TestForums so we do listen to your views

Tauno Jokinen from Oulu University will give a keynote speech on the topic "Challenges of Testing Over Innovation Life Cycle". Tauno Jokinen has many years of experience from various positions in the industry and academia and will most certainly give an interesting and entertaining speech.

The topic for this year's panel debate is "Selecting the right instrument bus" and will be preceded by presentations within this topic from providers and users perspective.

The sessions covering structural test includes presentations on X-Ray, fixturing and boundary scan. We will get up-to-date information on the development of new boundary scan standards. Additionally this year we have some Academic presentations, focusing on the future of testing.

The entire committee and I look forward to welcoming you at this years TestForum.

Yours sincerely



Knut Båtsstøløkken  
Chairman of *Nordic Test Forum*

## Local Organizer

The local organizer is:

Mick Austin

Tel.: +358-922431457

Email: [mick@jtag.com](mailto:mick@jtag.com)

## In Association with

The TestForum 2006 event is in association with the following Nordic organizations:



## Invited Speakers

### *Tauno Jokinen*

Oulu University

Ph.D. Tauno Jokinen has 25 years industrial experience from construction and telecommunications businesses. The experience includes management positions in R&D, manufacturing operations and product marketing. Since 2002 Tauno Jokinen has held an office as a professor of quality and project management at University of Oulu. Tauno Jokinen is the chairman of Northern Test Center – a collaborative research forum focusing on various areas of testing related to ICT industry.

Jokinen's own research interest is strategic management of testing; how testing should be managed and optimized over the innovation life cycle from research to disposal.



### *Michael J Smith*

Teradyne

Michael J Smith is currently a technologist for Teradyne's Assemble Test Division based in North Reading Mass. He has over twenty years of experience with Automatic Test Equipment starting with simulator based functional test systems in the early 80's, through to traditional electrical inspection systems, image based inspection systems and process monitoring and control. He has written numerous papers and articles as well as being the National Electronics Manufacturing Initiative (NEMI) Roadmapping Chair for Test and Inspection in 2000 and 2002 and IPC Technical Committee Member for APEX 2002, 2003 and 2004. With a European background in technical support and sales he has been actively involved in product development based on his relationships with major customers worldwide.



## Program

### Nordic Test Forum (NTF) Annual Assembly, November 27<sup>th</sup> 2006

NTF was established at TestForum 2001. We hold our annual assembly for NTF at 20:00 November 27<sup>th</sup>, 2006. The agenda and motions will be dispatched to the members in a separate mailing.

If you do not intend to participate in the Annual Assembly, the TestForum 2006 starts with Registration on 28<sup>th</sup> November from 9:00 to 9:30.

### Tuesday, November 28<sup>th</sup>, 2006

Time	Titles	Speakers or additional info
9:00-9:30	Registration	
9:30-9:40	<b>Welcome/Introduction</b>	Mick Austin
9:40-10:45	<b>Key Note Session</b>	<i>Chairman: Knut Båstøløkken</i>
9:40-10:45	"Challenges of Testing Over Innovation Life Cycle".	Tauno Jokinen, University of Oulu
10:45-11:00	Coffee Break / Exhibition	
11:00-12:00	<b>Session 1</b>	<i>Chairman: Bjørn B. Larsen</i>
11:00-11:30	Functional Board Test - Coverage Analysis What does it mean when a functional test passes?	Pete Collins, Aster Ingénierie
11:30-12:00	Exhibitor presentations	
12:00-12:30	Exhibition	
12:30-13:30	Lunch	
13:30-17:00	<b>Session 2</b>	<i>Chairman: Mick Austin</i>
13:30-14:00	LXI-the fastest growing instrumentation platform ever introduced	Peter Allum, VXI Technology
14:30-15:00	Create and Reconfigure Test Systems Faster with LXI Synthetic Instruments	Matti Meuronen., Agilent Technologies Finland
15:00-15:15	Coffee Break / Exhibition	
15:30-16:00	High speed serial device testing, PCI Express an enabling technology	Leif Johansson, NI
16:00-16:30	Choosing a PXI Strategy	Jyrki Piispa, Tellabs
16:30-17:00	Concept for Life-Cycle Testing of Electronic Devices by Means of Universal Test Communication Standard	Tuomas Happonen, University of Oulu
17:00-17:15	Fruit & Refreshments / Exhibition	
17:15-17:45	News from Conferences	Mick Austin; EBTW, Artur Jutman, BTW, Michael Smith; ITC
17:45-19:00	Panel debate: "Selecting the right instrument bus"	<i>Panel moderator: Birger Schneider</i>
20:00	Dinner	
21:30	Social get-together	

**Program, cont'd**  
**Wednesday November 29<sup>th</sup>, 2006**

Time	Titles	Speakers or additional info
<b>09:00-11:30</b>	<b>Session 3</b>	<i>Chairman: Stig Gunnar Jensen</i>
09:00- 09:45	The Economics of ICT, AOI vs AXI	Michael Smith, Teradyne
09:45-10:15	AOI and X-Ray Inspection. Is it worth the cost of Investment?	Keith Bryant, Dage
10:15-10:30	Coffe Break	
10:30-11:00	The impact of board AXI test on the Performance of DRAM	Bill Eklow, Cisco (presented by Mick Austin)
11:00-11:30	Optimization Model for Production Test Management	Matti Mottonen, University of Oulu
11:30-12:00	Exhibition	
12:00-13:00	Lunch	
<b>13:00-15:30</b>	<b>Session 4</b>	<i>Chairman: Artur Jutman</i>
13:00-13:30	A Flexible Cost-Effective Solution for Deploying Boundary-Scan Applications into Production	Anthony Sparks, JTAG Technologies inc
13:30-14:00	Power of manual programming in Boundary scan	Gerhard Vieweg, Göpel
14:00-14:30	Coffe Break	
14:30-15:00	S-JTAG and other boundary scan standards update	Thomas Kronqvist, Saab Test Systems
15:00-15:30	Fixturing Guidelines	Michael Smith, Teradyne
15:30-15:45	Test Forum Close	Knut Båtstøløkken

### Exhibition

As in previous years, there will be a mini show related to the tools and methodologies relevant to the NTF Forum event. Suppliers can make arrangements with NTF about exhibition space. If nothing special has been agreed, a table of about 70x140 cm<sup>2</sup>, as well as space for posters or similar material will be made available.

### Practical information

The **Seminar Fee** adds to EUR 390 for NTF members and EUR 425 for others. The fee includes participation, food and refreshments from Tuesday morning to Wednesday afternoon as well as documentation on CD. If you want the documentation on paper, we will charge an additional EUR 50 for this. Exhibitors pay EUR 750, which also includes the participation of a single person.

The seminar fee will be invoiced directly to the organisation, from which the participant comes. In the event of cancellation after the final registration date, or in the event of failure to appear, the entire fee is still due. On request, another person from the same organisation can participate instead.

The hotel rooms are booked through the seminar registration, but the room rate is paid directly by each participant to the hotel (i.e. not included in the seminar fee). **The room rate** is EUR 85 single and EUR 100 double per night, including breakfast.

Booking of rooms at the conference hotel is **not** mandatory for participation at the seminar.

The **Final Registration is Tuesday, November 7<sup>th</sup>, 2006**, in order to **guarantee hotel room**. **Registration after this date is also possible**. However, we cannot guarantee that hotel rooms are available at the conference hotel.

## Registration

Registration can be done through the NTF website by using the following link.  
[http://www.nordicestforum.org/events/ntf06\\_registration.htm](http://www.nordicestforum.org/events/ntf06_registration.htm)

Or by contacting the TestForum 2006 secretariat at: microLEX Systems

microLEX Systems A/S  
Dr. Neergaards Vej 5C  
DK-2970 Hoersholm  
Danmark  
  
Att.: Suzanne Holte  
  
Tel.: +45-45 76 21 00  
Fax: +45-45 76 22 00  
Email: [sho@microlexsys.com](mailto:sho@microlexsys.com)  
Web: [www.microlexsys.com](http://www.microlexsys.com)

Please indicate, whether you register as:

- NTF member EUR 390
- A non-member EUR 425
- An exhibitor, i.e. wants to participate in the small exhibition: EUR 750

Please indicate whether you like a paper copy of the presentations:

- Paper copy additional cost EUR 50

Please indicate whether you need a room at the conference hotel:

- Date of arrival
- Date of departure
- Single or double room

## Become Member of Nordic Test Forum

If you are involved in production test, validation test, and inspection of electronics, and your professional work is related to activities in the Nordic countries as a test professional, design engineer, manufacturer, supplier of solutions, consultant, or similar, you may register as member of Nordic Test Forum, NTF e.g. of the following reasons:

- Exchange of know-how in testing.
- Increased contact network in the Nordic countries.
- Surveillance and information of International activities in the area of test and inspection.
- Discounts at NTF seminars and TestForum events.
- Membership list

You can register for NTF membership on the WEB page: <http://NordicTestForum.org>

## Nordic Test Forum in Short

*TestForum* is an annual event that *Nordic Test Forum (NTF)* runs every fall/early winter. NTF may also run thematic events during a year, but these are focused events addressing basically only one topic area, each in the area of test and inspection of electronics, whereas TestForum typically has 3-thematic areas and cover the broader balance of test and inspection as well.

*TestForum* has its roots back the late eighties, where it originated as an event for the Norwegian electronics industry. However, from the late part of 2001 a group of people from Sweden, Norway and Denmark established the network, *Nordic Test Forum*. Later on, this activity (including the *TestForum* event) was extended to include all the Nordic countries. The language of the official presentations is English. Content and focus of the TestForum varies over time, but always within topic areas in focus at a given point in time.

*TestForum* has its main emphasis on issues relevant to production managers, engineers and technicians working in the fields of production, test, inspection and validation of electronics. At TestForum events we offer technically relevant presentations on methodology, tools, modules/instruments and available technology. The interaction between users and suppliers within the focus areas is an important asset of TestForum, and this balance and interaction is pursued in presentations, panel discussions, and in the planning of the events.

### TestForum Aims at:

- Creating and sustaining a relevant, balanced and coherent interaction between users as well as between users and suppliers of solutions for test, inspection, validation and production of electronics.
- Providing an up-to-date view on new methodologies and tools for relevant test, inspection, validation and production of electronics.
- Establishing a relevant and balanced view on equipment, systems, tools and software from tool vendors in the domain.

### Target Group of TestForum

Engineers and technicians, managers and planners within the fields of electronics production and test, inspection and validation. Includes also decision makers in organizations that procure equipment, tools and systems for production and test, inspection and validation of electronics.

### Executive Committee of TestForum and NTF

Knut Båttstøløkken	Kitron AS (Chairman)
Birger Schneider	microLEX AS (Treasurer)
Bjørn B Larsen	NTNU Department of Electronics and Telecommunications (Secretary)
Stig-Gunnar Jensen	Flextronics International Norge AS
Bengt Magnhagen	Högskolan i Jönköping
Mick Austin	JTAG Technologies Finland
Gunnar Carlsson	Ericsson AB
Jürgen SedlacekAlvetec	KonTest AB
Jukka Antila	Nokia Networks
Artur Jutman	Tallinn University of Technology

## Gustavelund Conference Hotel information



Not many hotels have such an ideal location as Gustavelund. Only half an hour away from Helsinki - and yet with splendid natural surroundings, on the shores of sparkling Lake Tuusula.

Gustavelund itself has an illustrious history. Originally known for its fine stables, it was transformed into a versatile conference hotel in 1990. Gustavelund offers professional conference services for both corporate and private customers. Gustavelund has also developed a wide range of entertainment services, with events taking place in the historic milieu of the Rantatie road and the pleasant facilities of Gustavelund - including its exotic indoor garden.

### Conference Hotel Gustavelund

Kirkkotie 36,  
04310 Tuusula,  
tel. +358 9 273 751  
<http://www.gustavelund.fi/>



## Transport information

### By car

Only 15 minutes from Helsinki-Vantaa International Airport, 30 minutes from Helsinki city centre, 10 minutes from Kerava train station, and 10 minutes from Järvenpää. Gustavelund can provide free parking for 350 cars.

### By taxi

The fastest way to get to Gustavelund from the airport is by taxi. The ride costs approx. Eur 24.

### By bus

Buses leave from Helsinki bus station approximately twice an hour. The bus trip to Gustavelund takes approx. 50 min.

### By train

The nearest railway station is Kerava, located 4 kilometres from Gustavelund.

- **Trains from Helsinki railway station**

Approximately four trains every hour, the train ride takes 20 min.

- **Fast trains from the north**

Change trains at Riihimäki station

Trains from Riihimäki to Kerava: approximately two trains every hour, the train ride takes 40 min. The fastest way to get from Kerava train station to Gustavelund is by taxi. There is a taxi stand at the train station. The taxi ride takes 10 minutes and costs approx. EUR 11.



