

International Institute of Connector and  
Interconnection Technology, Inc.

**38<sup>th</sup> IICIT Connector and  
Interconnection Technology  
Symposium and Expo  
2007**

May 8-9, 2007  
Dedham, Massachusetts, USA

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

**ISBN: 978-1-60423-340-7**

**Some format issues inherent in the e-media version may also appear in this print version.**



International Institute of Connector and Interconnection Technology, Inc.  
38<sup>th</sup> IICIT Connector and Interconnection Technology Symposium and Expo  
2007

## TABLE OF CONTENTS

<b>IICIT 2007 Symposium &amp; Expo</b> .....	1
<i>Dale Reed</i>	
<b>Fiber Optic Interconnection: Basics of Fiber Optics Communications</b> .....	5
<i>Douglas Parker</i>	
<b>Elements of a Fiber Optic System</b> .....	27
<i>Douglas Parker</i>	
<b>The Fiber</b> .....	55
<i>Douglas Parker</i>	
<b>Interconnections</b> .....	95
<i>Douglas Parker</i>	
<b>Fiber Optic Testing</b> .....	182
<i>Douglas Parker</i>	
<b>Fiber Optic Tooling</b> .....	215
<i>Douglas Parker</i>	
<b>Fiber Optic Standards</b> .....	226
<i>Douglas Parker</i>	
<b>Fiber Optic Systems</b> .....	240
<i>Douglas Parker</i>	
<b>ROHS, Its Effects on the Connector Industry</b> .....	256
<i>Darrell Fernald</i>	
<b>Evolution of Tin Coatings for Connector Applications</b> .....	272
<i>Anders Kamf, Michael Silvestri</i>	
<b>Thickness Effect of Tin Layer on Initial Resistance Increase in Relatively Moving Contacts</b> .....	281
<i>Kyota Susai, Kazuo Yoshida</i>	
<b>Center Contacts in F-Connectors</b> .....	295
<i>Dale Reed, Steve Lampen</i>	
<b>Filter Connector Technologies</b> .....	314
<i>Neil Mahaffy</i>	
<b>Failures of Electrical Connectors: Selected Case Studies</b> .....	332
<i>Nosh Medora, Alexander Kusko</i>	
<b>SMA Connectors with Extended Frequency Range</b> .....	353
<i>Rudy Fuks</i>	
<b>Reliable RF Connections for Wireless Microwave Towers</b> .....	372
<i>Bruce Carlson</i>	
<b>Advances in Cable Assemblies for High Speed Digital Data Transmission</b> .....	379
<i>Steve Rosenberg</i>	

<b>European Activities on Interconnection Components for Space Applications</b> .....	394
<i>Oliver Perat</i>	
<b>Problems Associated with Lock Wires</b> .....	411
<i>Rob Cousar, Jr.</i>	
<b>Home Stretch!</b> .....	419
<i>Dale Reed</i>	
<b>World Connector Industry</b> .....	428
<i>Rick Couto, Ronald Bishop</i>	
<b>Legacy Learning on Copper and Optical Wirelines in the Audio-Video-Broadcast- Entertainment Market</b> .....	462
<i>Steve Lampen</i>	
<b>Connector Fundamentals: "The More You Understand What Goes Into Your Connector, The More You Can Expect To Get Out Of It"</b> .....	478
<i>Tom Peel</i>	
<b>Evolution of Tin Coatings for Connector Applications</b> .....	508
<i>Anders Kamf, Michael Silvestri</i>	
<b>Application Suitability of Military Fiber Optic Connectors</b> .....	528
<i>William Reid</i>	
<b>Fiber Optic Flex Circuit and Shuffles</b> .....	557
<i>Rob Wheeler</i>	
<b>Microbending of Optical Fiber Cables in Aerospace Environments</b> .....	572
<i>Douglas Hardy</i>	
<b>Next Generation Navy Fiber Optic Interconnect NGCon Development</b> .....	586
<i>Greg Noll</i>	
<b>Capture Geometry Internally</b> .....	610
<i>Craig Crump</i>	
<b>Expanded Beam Technology for Tactical Field Deployment</b> .....	637
<i>Marc Motazedi</i>	
<b>High Frequency S Parameter Issues and Understanding</b> .....	657
<i>Dale Reed</i>	
<b>Author Index</b>	