

Tuesday 15th May 2018

0900 – 1030 *Introduction & Keynote Speakers*

**1030-1100 *Test & Verification (Short Papers)*
*Session Chair, Ron Logan, Glenair Inc.***

- (51) Stuart Mills, Chris McClements, David Paterson, Pete Scott, Steve Parkes; TESTING OVER ETHERNET WITH THE SPACEWIRE GBE BRICK
- (01) Daniel DeLazari, Aleksander Deucher, Angela Santos, Saulo Finco, Armin Horn, Matthias Beer, Volker Ohlen; DEBUG AND VERIFICATION OF SPACEWIRE LINKS
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**1130-1235 *Missions & Applications (Long & Short Papers)*
*Session Chair, Stuart Mills, STAR-Dundee Ltd***

- (31) Fredy Lange, Ran Ginosar, Peleg Aviely, Tsvika Israeli; IMAGING NOGAH SOFTWARE-DEFINED SYSTEM COMPRISING MANY RC64 PROCESSORS FOR OPTICAL AND SAR OBSERVATION SATELLITES
- (59) Susan Clancy, Matthew Chase, Anusha Yarlalagadda, Michael Starch, James Lux; SPACEWIRE AS A CUBE-SAT INSTRUMENT INTERFACE
- (03) Hans-Juergen Sedlmayr, Ralph Bayer, Alexander Beyer, Maximilian Maier, Nikolaus Seitz, Maxime Chalon, Wieland Bertleff, Werner Friedl, Thomas Obermeier; SPACEHAND: A MULTI-FINGERED ROBOTIC HAND FOR THE USE IN SPACE
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**1405-1455 *Components 1 (Long Papers)*
*Session Chair, Dirk Thurnes, ESA***

- (13) Stéphane Hermant, Kevin Enouf; THE EVOLUTION OF SPACEWIRE ELECTRICAL INTERCONNECT
- (45) Nils-Johan Wessman, Fredrik Johansson, Francisco Hernandez, Jan Andersson, Claudio Monteleone, Roland Weigand; STATUS UPDATE ON NEW STANDARD PRODUCTS WITH SPACEWIRE SUPPORT
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**1525-1615 *Components 2 (Long Papers)*
*Session Chair, Jan Andersson, Cobham Gaisler AB***

- (56) Albert Ferrer-Florit, Alberto Gonzalez Villafranca, Steve Parkes, Chris McClements; SPACEFIBRE INTERFACE AND ROUTING SWITCH IP CORES
- (57) Ronald T Logan; PHOTONIC TRANSCEIVERS FOR SPACEFIBRE DATALINKS
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Wednesday 16th May 2018

0900 - 1045 ***Components (Short Papers)***
Session Chair, Joseph R Marshall, BAE Systems

- (07) Daniel González, Jesús López, Adrien Frouin, Jürgen Beister, David Levacq; SPACE-QUALIFIED EUROPEAN LVDS COMPONENTS FOR SPACEWIRE NETWORKS
- (19) Richard Johannes; COMPARATIVE PERFORMANCE OF VITA 78 CONNECTOR SYSTEMS FOR DAUGHTER CARD TO BACKPLANE APPLICATION
- (20) Richard Johannes; MODULAR INTERCONNECT FOR POINT TO POINT AND BACKPLANE SPACE APPLICATION
- (29) Marco Ruiz, Jean-Brieuc Feron; CONTROL LOOP PROCESSOR: A RELIABLE AND AGILE PROCESSING PLATFORM FOR MISSION CRITICAL APPLICATIONS
- (47) Gil Baterina, Alan Senior; GALVANIC ISOLATION OF SPACEWIRE PORTS – AN INNOVATIVE DESIGN APPROACH
- (22) Mikko Karppinen, Antti Tanskanen, Jyrki Ollila, Demetrio Lopez Molina, Juan Barbero, Cesar Boatella Polo, Richard Jansen, Iain McKenzie; RADIATION TOLERANT OPTICAL TRANSCEIVERS FOR SPACEFIBRE DATA LINK
- (34) Hiroki Hihara, Mitsunobu Kuribayashi, Kyoko Murozono, Kazuyuki Yamada, Yu Otake, Kazutoshi Kobayashi, Yuto Tsukita, Haruki Marouka, Jun Furuta; PROGRAMMABLE SPACEFIBRE INTERFACE WITH NANOBIDGE FIELD PROGRAMMABLE GATE ARRAY
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1115 - 1200 ***On-board Equipment & Software (Short Papers)***
Session Chair, Hiroki Hihara, NEC Space Technologies Ltd

- (04) Toru Sasaki, Shinya Hirakuri; SPACEWIRE AND SPACEFIBRE FOR INTERNAL ARCHITECTURE IN NVDRs
- (14) Joseph Marshall; STANDARDIZED HIGH PERFORMANCE SPACEVPX MODULES LEVERAGE SPACEWIRE AS AN INTERNAL/EXTERNAL CONTROL FABRIC
- (58) Susan Clancy, James Lux; ABSTRACTED SPACEWIRE INTERFACE FOR DEEP SPACE RADIO
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1330 - 1500 ***Networks & Protocols (Short Papers)***
Session Chair, Albert Ferrer-Florit, STAR-Barcelona S.L.

- (06) Thomas Bahls, Markus Bihler; USING SPACEWIRE TIME-CODES FOR GLOBAL SYNCHRONIZATION OF PLL-BASED LOCAL CLOCKS
- (09) Markus Bihler, Thomas Bahls, EFFICIENT IMPLEMENTATION OF ON-CHIP COMMUNICATION OPTIMIZED FOR SPACEWIRE NETWORKS

- (35) Makoto Tomitaka, Yasushi Igarashi, Satoshi Ichikawa, Noriyasu Inaba, Atsushi Tomiki, Keiichi Matsuzaki, Ryouhei Kobayashi, Minoru Kumakiri, Iwao Fujishiro, Masaharu Nomachi; FEASIBILITY STUDY OF WIRELESS COMMUNICATION SYSTEM OPERATING ON SPACEWIRE NETWORK
- (40) Sadatoshi Eguchi, Takeshi Takashima, Iku Shinohara; SPACEWIRE NETWORK SYSTEM FOR ERG MISSION NETWORK AND THE RESULT OF ITS PERFORMANCE
- (16) Alessandro Leoni, Luca Fanucci, David Jameux; SIMULATOR FOR HIGH-SPEED NETWORKS (SHINE): AN OMNET++ SIMULATOR FOR SPACEFIBRE AND SPACEWIRE NETWORKS
- (30) Felix Siegle, Alessandro Leoni; STANDARDISATION EFFORTS FOR A NETWORK MANAGEMENT AND DISCOVERY PROTOCOL FOR SPACEFIBRE
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1500 – 1630 Poster Presentations

Thursday 17th May 2018

0900 - 1015 *On-board Equipment & Software (Long Papers)*
Session Chair, Masaharu Nomachi, Osaka University

- (46) Erich Weih, Richard Wiest, Ottmar Ried, Paul Rastetter, Michael Stahle, Gunther Lohse, Martin Steiner; SPACEFIBRE BASED MASS MEMORY – EXTREME RAPID MASS MEMORY UNIT (EXTRA MMU) ENABLED BY SPACEFIBRE
- (54) Steve Parkes, Ashish Srivastava, Chris McClements, Pete Scott, David Dillon, Albert Ferrer Florit, Alberto Gonzalez Villafranca; SPACEFIBRE CAMERA
- (55) Steve Parkes, Pete Scott, David Dillon, Martin Dunstan, Chris McClements, Albert Ferrer Florit, Alberto Gonzalez Villafranca; SPACEVPX-RTG4 BOARD WITH SPACEWIRE OR SPACEFIBRE BACKPLANE
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1045 - 1225 *Networks & Protocols (Long Papers)*
Session Chair, Jim Lux, Jet Propulsion Laboratory

- (36) Irina Lavrovskaya, Elena Suvorova, Alexey Khakhulin, Igor Orlovsky, Yuriy Sheynin, Ilya Korobkov, Valentin Olenev; REAL TIME VIDEO DATA TRANSMISSION IN SPACEFIBRE NETWORKS WITH THE ESDP TRANSPORT PROTOCOL
- (62) Dirk Thurnes; SPACEWIRE AND SPACEFIBRE OVERVIEW AND ROADMAP
- (42) Charles Patrick Collier; A SWAPC SCALABLE HIGH PERFORMANCE HARDWARE STANDARD FOR 6U/3U VPX BASED PROCESSING AND I/O SYSTEMS
- (48) Krzysztof Romanowski, Wojciech Mich, Piotr Tyczka, Rafal Renk, Vangelis Kollias, Nikos Pogkas; EVALUATION AND INTEROPERABILITY TESTING OF THE SPACEWIRE-R PROTOCOL
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1355 - 1445 ***Test & Verification 1 (Long Papers)***
Session Chair, Thomas Bahls, German Aerospace Centre (DLR)

- (15) Irina Lavrovskaya, Yuriy Sheynin, Valentin Olenev, Ilya Korobkov, Lev Kurbanov, Dmitry Dymov; COMPUTER-AIDED DESIGN SYSTEM FOR ONBOARD SPACEWIRE NETWORKS
- (25) Ran Ginosar, Peleg Aviely, Roy Neshet, Zeev Meister, Tsvika Israeli, Dror Reznik; TESTING AND VALIDATION OF SPACEWIRE CONTROL AND DATA LINKS OF RC64

1515 - 1630 ***Test & Verification 2 (Long Papers)***
Session Chair, Irina Lavrovskaya, Saint-Petersburg State University of Aerospace Instrumentation

- (52) Stephen Mudie, David Gibson, Chris McClements, Stuart Mills, Steve Parkes; TESTING SPACEFIBRE EQUIPMENT AND SYSTEMS
- (53) Stephen Mudie, David Gibson, Chris McClements, Stuart Mills, Steve Parkes; SPACEWIRE LINK ANALYSER MK3 AND SPACEWIRE RECORDER
- (61) Scott Calkins, Scott Aron Bloom; STATIC ANALYSIS FOR SPACEWIRE IP CORES

Poster Presentations

- (05) Thomas Bahls, Markus Bihler, Sergey Tarassenko; SPACEWIRE MEETS BIG DATA – REALTIME DATA MINING
- (17) Irina Lavrovskaya, Ilya Korobkov; APPROACH TO INCREASE SPACEFIBRE LINK BANDWIDTH USAGE FOR STREAMING DATA TRANSFER
- (24) Fredy Lange, Ran Ginosar, Tsvika Israeli, Gilad Danin, Moshe Goren, Peleg Aviely; WIDEBAND DVB-S2X FOR EOS DOWNLINK ON SPACEFIBRE-INTERCONNECTED DUAL RC64
- (33) Yi Xiaosu, Zeng Huasong, Zhang Chunxi; IMPLEMENTATION OF SPACEWIRE OPTICAL FIBER LINK FOR HIGH-SPEED AND LONG-DISTANCE DATA ACQUISITION
- (39) Sadatoshi Eguchi, Takeshi Takashima, Iku Shinohara; DEVELOPMENT OF THE NEW MISSION DATA RECORDER (MDR) WITH SPACEWIRE INTERFACE ONBOARD THE ERG SPACECRAFT AND THE RESULT OF ITS PERFORMANCE ON ORBITS
- (41) Yu Junhui, Niu Yuehua, Li Xiaojuan; COMMUNICATION PROTOCOL BASED ON TIME MULTIPLEXING FOR SPACEWIRE DATA HANDLING NETWORKS
- (43) Charles Patrick Collier, Bill Ripley; SPACEVNX: A SCALABLE AND HIGHLY FLEXIBLE SMALL FORM FACTOR STANDARD FOR SMALL-SATS AND CUBESATS
- (49) Tatiana Solokhina, Jaroslav Petrichkovich, Alexander Glushkov, Leonid Menshenin, Denis Kuznetsov, Steve Parkes, Dmitri Dymov; RADIATION TOLERANT MICROPROCESSOR FOR THE COMPUTER VISION WITH SPACEFIBRE LINKS
- (50) David Poudereux, Juan Barbero, José Manuel G. Tijero, Ignacio Esquivias, Iain Mackenzie; OPTICAL SWITCHES WITH NO MOVING PARTS FOR SPACE APPLICATIONS
- (60) Jih-Jong Wang, Nadia Rezzak, Stephen Varela, Ken O'Neill, Aug Gu, Esmat Hamdy; SERDES SINGLE EVENT EFFECTS IN 65NM FLASH-BASED RTG4 FPGA