Susan Kay Hares (Sue)

Susan Hares	shares@ndzh.com
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Susan's passion is to inspire others to lead with passion and moral integrity in a variety of fields (technology development, international standardization, and Christian Churches).

Ms. Hares has designed and deployed routing protocols and architectures for over 30 years. She is currently co-chair of the IETF's Inter-Domain Routing (IDR), Interface to Routing System (I2RS), and TRILL working groups Susan is also the co-author on the BGP specification. Susan is recognized as one of the top experts in Internet routing. She's been considered Michigan's Top Woman in Computing (2004), and Cisco's leaders for women in computing (2002-2003).

Starting 2015, Ms. Hares began consulting, writing books, and teaching. Currently she is consulting with Huawei on new technologies for the Internet (I2RS, SDN, Security devices, massively large networks (Data Center or phone)). She is writing books on early church leadership, consensus decision-making in voluntary organizations, and Internet technology. Ms. Hares works teaches as adjunct professor at Regent University teaching biblical Greek and Greek Exegesis.

In 2014, Ms. Hares joined ADARA, an end-to-end Software Defined Routing company. As the Vice-President of Technology and Strategy, Ms. Hares focused on setting outbound marketing direction and working with clients to set future product directions.

From 2010-2013, Susan Hares was the Senior Director of Standards for Futurewei Technologies, Inc. (Huawei). Susan managed a team of ten standards people working in BBF, MEF, IETF, IEEE, NANOG, and OIF focusing on next-generation work such as SDN, Cloud networking, L2/L3VPN, ONF interface, TRILL, SPBB, OTN, and next generation access (BNG). Sue's team provided early research and product demonstrations of SDN in 1H 2012.

From 2007-2009, Susan Hares was Director of Networking Solutions at Green Hills Software. During that time, she guided a team putting routing software on a secure OS, and created the basis for a secure Data Center switch with multiple chassis. She hired and managed a coding team and a QA team.

From 2002-2007, she was the Chief Technology Officer of NextHop Technologies, a company she founded in 2000. During the first years of NextHop Technologies, Sue was also the VP of Engineering. Sue served on the NextHop Board of Directors. During 2004-2007, Sue also contributed to the 802.11s specification for wireless technology.

From 1995 – 2002, Sue was the Director of the Merit GateD Consortium, bringing together international Internet technology businesses in the design, specification, and implementation of network routing and network management protocols. Under her direction, the GateD consortium grew from 5 members in 1996 to 43 members in April 2000 with a final budget of approximately two million dollars. GateD routing technology is deployed across the Internet.

- Featured for creation of NextHop by the University of Michigan's Zell-Lurie Institute's Entrepalooza (2009) and Silicon Valley Biz Spotlight (2003)
- Founded NextHop Technologies a company with:
  - World leading OEM Software for routing, switching and Wireless LAN (GateD and

UNS 4.0) which formed the basis for over 150 customer products in the field and early virtual routing platforms (hosting over 2000 routers).

- o 4 development sites (California, Michigan, Boston, and Bangalore India)
- o 4 sales offices (California, Boston, Stockholm-Sweden, Beijing China), and over 95 employees
- o Backing of Top Tier Silicon Valley Venture Capital NEA and Parker-Price
- Profitable 1<sup>st</sup> year of business (2000) prior to funding.

#### **INSTRUCTOR**

**Instructor for Greek 1 Regent University** 

Instructor for BNTB 542 – Greek Exegesis **Regent University** 

**Teaching Assistant Regent University Teaching assistant** 

Ms. Hares aided Dr. Lyle Story as a teaching assistant for Greek 1 and Greek 2. Duties included setting up class-work on the Blackboard site, grading papers, aiding in online-classes, and teaching tutorials (1-2 per week).

#### COMPUTER PROFESSIONAL

#### **Hickory Hill Consulting** Consultant

Ms. Hares consults for top tier routing companies on Software Defined Routing to drive SDN standards in the IETF and other standard organizations, and is writing a book on Software Define Networking.

#### **ADARA**

#### Vice President of Technology and Strategy

Ms. Hares set the strategic direction for ADARA's Software Defined Networking handling both outbound marketing and interacting with customers to set market direction. Active in standard activities in IETF and other Industry standards, Ms. Hares also set the direction for the IT industry.

#### Huawei

#### **Senior Director of Standards Distinguished Engineer**

Ms. Hares set the technology direction for a team of 10 senior people working on Standards in IETF, MEF, BBF, IEEE, OIF, and NANOG. This team of experts worked on hot topics in networking such as SDN, Cloud Computing, Data Center technology, TRILL, IEEE 802.1, IEEE 802.11, and IEEE 802.21.

#### Green Hills Software

#### **Director of Networking Solutions**

Ms. Hares set the technology direction, managers an engineering team of 17, and drove business development in Green Hills software Networking. Her key customers included the 2<sup>nd</sup> largest manufacturer of routing solutions.

#### NextHop Technologies, Incorporated **Chief Technical Officer, Founder**

# 2013-2014

#### 2010-2013

# 2007-2009

### 2011-2016

2014-present

August 2017 – current

May 2017 – August 2017

2000-2007

Ms. Hares set the technology direction, managed the patent portfolio, drove international standards in IEEE and IETF on wired and wireless networks, trained engineers on the latest technology advances, developed prototypes of new technology, worked with customers to create value-added OEM products, Collaborated with partners to create the NextHop UNS Internet Service Vendor partners and speaks extensively on new Internet technology. Ms. Hares served on the Board of Directors of NextHop Technologies since its inception.

Ms. Hares founded NextHop Technologies in February, 2000 with the first sale of routing software by 2Q 2000. During 2000, she managed the transition of Merit GateD Consortium members to NextHop customers, managed a growing team of up to 40 engineers developing code for the NextHop GateD, trained customers, and set technology and business directions.

NextHop delivered OEM routing software to over 150 customers world-wide. The GateD software included highly scalable code for layer 2 and layer 3 routing (Unicast, Multicast, and MPLS L3 VPNs and MPLS L2 VPNs), and Wireless routing. This code base was deployed with 3 major switch vendors in the SMB market.

#### Merit Network, Incorporated Manager, GateD, RSNG, Bandwidth Broker, FAA Program

Led design, specification and implementation of network routing and management protocols for GateD.

Ms. Hares directed the Merit GateD Consortium from its inception in 1996 to its transition to a commercial company in 2000. She was a senior staff member on the NSFnet Backbone Network Project and NSFnet Routing Arbiter project. She led the Internet2 project Qbone Activities for Bandwidth Broker, and was a principal investigator for the Bandwidth Broker project funded by Sun Microsystems. Ms. Hares sponsored the first Bandwidth Broker Operability Event in November 1999. From 1992 to 1995, Ms. Hares acted as the Principal Investigator under FAA grant (92-G-0018) to Merit Network, Inc., "Implementation of Inter-Domain Routing Protocol in GateD."

#### Senior Engineer, Allen-Bradley Corporation

Ms. Hares participated in MAP/TOP 3.0 network management and network layer committees. She developed network protocols and network management of the MAP/TOP 3.0.

#### Senior Engineer, Network Services Division, ADP, Incorporated

Designed, specified and implemented transport protocols, network management protocols, and routing protocols for the ADP private packet switch network. Designs and implementations included: early link-state protocols, X.25 PAD transport protocols, network management protocols, real time system software device drivers, multi-processor real message systems, and host queuing software for hosts and routers.

### Junior Engineer, Transmission and Chassis Division, Industrial Control Software Group, Ford Motor Company

Specified and deployed factory networks to monitor factory manufacturing and environmental equipment. Duties included on-call duty for factory network.

#### Education

Bachelor of Science in Computer Engineering, University of Michigan	1977
Masters of Organizational Leadership, Regent University Business School	2006-2008
Masters of Divinity, Asbury Theological Seminary	2008-2010
Area of focus: Greek Studies (Greek 1-3, Readings in Greek,	
Exegetical study of Colossian, Exegetical study of Galatians),	
Historical and theological studies, and church leadership	

#### 1986-1987

#### 1979-1986

# 1977 - 1979

#### 1987-2000

Post Bachelor's course work

•	Business courses at Eastern Michigan University	1978-1980
<ul> <li>PhD Program in Organizational leadership, Business School,</li> </ul>		
	Regent University	2011-2022
	PhD area of focus: Ecclesial Leadership.	
	PhD dissertation topic Consensus based decision-making	

Research includes an examination of the leadership skills of Pope Clement demonstrated in the Greek text of 1 Clement and Acts 15 – as leadership in consensus decision making in the 1<sup>st</sup> Century Christian church.

#### Awards:

- 2010 Regent Alumni of the Year School of Leadership
- Top Michigan Women in 2004 <u>CTO and Founder Sue Hares Named One of "Top Michigan Women in Computing":</u> August 23, 2004 (<u>http://www.awc-aa.org/gala/releases/2004-08-23release.pdf</u>)

The Top Michigan Women in Computing must have authored significant technical advances and mentored other computer professionals.

- Featured on Silicon Valley Biz (2003) Interview with CTO and founder Sue Hares September 5, 2003, Silicon Valley Business
- Featured on Cisco Web site for Women in Computing (2002-2003) <u>Cisco features NextHop CTO and Founder Sue Hares on its Women in IT Profiles</u> January 21, 2003 - CommsDesign.com
- Honorary Member of the WestNet Regional Network Due to repeated lectures at the WestNet Regional Network, the directors of WestNet presented Susan Hares with an Honorary Membership.
- ADP Autonet Outstanding Employee This award was given for creating a complete new product for Bi-sync processing over X.25.

#### **Internet Society:** (1996 - 2000)

Developing Nations Workshop Instructor for INET '96, '97, and '98 Participated in NATO workshop on Internet Technology in St. Petersburg, 1998. Contributed staff members to INET '99

**IETF:** (1987-present) Chaired Network Joint Management (NJM) and the Network OSI OPerations (NOOP) working groups, during the period 1987 - 1995

#### ANSI X3S3.3: (1987-1994)

Contributed to the IS-IS and IDRP ISO specifications, during 1987 - 1994.

MAP/TOP: 1985-1986 forming the MAP/TOP network management 3.0

**ACM:** 1977-1978, Participated in Detroit ACM meetings arranging a local software conference

### **COLLABORATIVE EFFORTS**

#### NANOG:

Lead efforts to establish NSFnet Regional Techs meeting which became NANOG Member of Regional Techs Steering committee [1987-1995] Member of the Steering committee [1995-2005]

#### **Interop OSI demonstration**

Organized collaborative demonstrations of routing protocols, such as the demonstration of OSI at INTEROP 1991 which mobilized regional networks, host and router vendors, and academic institutions.

# **Papers and Presentations**

### **Monitored Journal Papers**

- Haleplidis, Evangelos, Jamal Hadi Salim, Joel M. Halpern, Susan Hares, Kostas Pentikousis, Kentaro Ogawa, Weiming Wang, Spyros Denazis, and Odysseas Koufopavlou. "Network programmability with ForCES." IEEE Communications Surveys & Tutorials 17, no. 3 (2015): 1423-1440.
- Hares, Susan, and Russ White. "Software-Defined Networks and the Interface to the Routing System (I2RS)." *IEEE Internet Computing* 17, no. 4 (2013).\
- Hares, Susan, and Russ White. "Bgp dynamic as reconfiguration." In *MILCOM 2007-IEEE Military Communications Conference*. 2007.
- Neilson, Rob, Jeff Wheeler, Francis Reichmeyer, and Susan Hares. "A discussion of bandwidth broker requirements for Internet2 Qbone deployment." ver. 0.7, August (1999).
- Teitelbaum, Benjamin, Susan Hares, Larry Dunn, Robert Neilson, Vishy Narayan, and Francis Reichmeyer. "Internet2 QBone: building a testbed for differentiated services." *IEEE network* 13, no. 5 (1999): 8-16.

#### IETF Internet Standards (Request for Comments (RFCs))

- Atlas, Alia, Joel Halpern, Susan Hares, David Ward, and Thomas Nadeau. "An architecture for the interface to the routing system", RFC 7921 (2016).
- Berkowitz, Howard, Elwyn Davies, Susan Hares, Padma Krishnaswamy, and Mariane Lepp."Terminology for benchmarking bgp device convergence in the control plane." RFC 4098. (2005).
- Cam-Winget, Nancy, Scott G. Kelly, Michael Williams, Susan Hares, Bob O'Harea, Rohit Suri, Pat. R. Calhoun, "Lightweight Access Point Protocol", RFC5 412 (2010).
- Deering, Steve., Susan Hares, Charlie Perkins, and Radia Perlman. Overview of the 1998 IAB Routing Workshop. RFC 2902 (2000).

Haas, Jeff, and Susan Hares. "Definitions of managed objects for BGP-4", RFC4273 (2006).

- Haas, Jeff, and Susan Hares. "Interface to Routing System (I2RS) Ephemeral State Requirements", RFC 8242 (2017).
- Hares, Susan and David Hares. "BGP-4 MIB Implementation Survey", RFC 4275 (2005).
- Hares, Susan, and David Katz. "Administrative Domains and Routing Domains: A model for routing in the Internet", RFC 1136 (1989).
- Hares, Susan, Diego Lopez, Myo Zarny, Christian Jacquenet, Rakesh Kumar, and Paul Jeong, "Interface to Network Security Functions (Problem statement and Use Cases), RFC 8192 (2017)
- Hares, Susan, Daniel Migault, and Joel Halpern, "I2RS Security Related Requirements", RFC 8241 (2017).

Hares, Susan, and Alvaro Retana. "BGP-4 implementation report", RFC 4276. 2005.

Hares, Susan and Cathy Wittbrodt. Essential tools for the OSI Internet. No. RFC 1574. 1994.

Loibl, Christoph, Susan Hares, Robert Raszuk, Danny McPherson, Martin Bacher, "Dissemination of Flow Specification Rules", RFC8955, (2020).

Loibl, Christoph, Susan Hares, Robert Raszuk, Danny McPherson, Martin Bacher, "Dissemination of Flow Specification Rules for IPv6", RFC8956 (2020).

Papneja, Rajiv, Bhavani Parise, Susan Hares, Dean Lee, and Ilya Varlashkin. "Basic BGP Convergence Benchmarking Methodology for Data-Plane Convergence", RFC 7747 (2016).

Rekhter, Yakov, Tony Li, and Susan Hares. "A border gateway protocol 4 (BGP-4)", RFC 4271 (2005).

Varadhan, K., S. Hares, and Y. Rekhter. "BGP4/IDRP for IP---OSPF Interaction", RFC 1745 (1994).

Wittbrodt, C., and Susan Hares. "An Echo Function for CLNP (ISO 8473).", RFC1575 (1994).

**RFCs in order:** RFC 1574, RFC 1575, RFC 1745, RFC 2902, RFC 4098, RFC 4271, RFC 4273, RFC 4275, RFC 4276, RFC 5412, RFC 7747, RFC 7921, RFC 8192, RFC 8242, RFC 8955, RFC 8956.

#### **IETF Emerging Standards (Internet Drafts accepted as IETF Working Group items):**

- Bush, Randy, Russ Housely, Rob Austein, Susan Hares, and Keyur Patel, "Layer-3 Neighbor Discovery), draft-ymbk-idr-13nd-05.txt (Individual draft, October 2022).
- Dunbar, Linda, Susan Hares, Robert Raszuk, Kausik Majumdar, and Gyan Mishra. "BGP Update for SDWAN Edge Discovery", draft-ietf-idr-sdwan-edge-discovery-04.txt (WG draft, Aug, 2022).
- Hares, Susan, Donald Eastlake, Chaitanya Yadlapalli, and Sven Maduschke. "BGP Flow Specification version 2", draft-ietf-idr-flowspec-v2-01 (WG draft, October 2022).
- Hares, Susan, Jaehoon Paul Jeong,, Jinyong Kim, Robert Moskowitz, and Qiushi Lin, "I2NSF Capability Yang Data Model", draft-ietf-i2nsf-capability-data-model-32 (pending RFC, May 2022).
- Hares, Susan and Keyur Patel. 2016. "AS Path Outbound Route Filter for BGP-4". URL: <u>https://datatracker.ietf.org/doc/draft-ietf-idr-aspath-orf</u> (WG draft),
- Jeong, Jaehoon Paul, Patrick Lingga, Susan Hares, Liang Xia, Henk Birkholz, "I2NSF NSF Monitoring Interface Yang Data Model", draft-ietf-i2nsf-monitoring-data-model, (pending RFC, June 2022).
- Jeong, Jaehoon Paul, Sangwon Hyun, Tae-Jin Ahn, Susan Hares, Diego Lopez, "Applicability of Interfaces to Network Services Function to Network-Based Security Services", draft-ietfi2nsf-applicability-18.txt (pending RFC, July 2022)
- Jeong, Jaehoon Paul, Chaehong Chugn, Tae-Jin Ahn, Rakesh Kumar, Susan Hares, "I2NSF Consumer-Facing Interface Yang Data Mode", draft-ietf-i2nsf-consumer-facing-interfacedm-23.txt, (Publication requested, October 2022).
- Jeong, Jaehoon Paul, Patrick Lingga, Park Jung-Soo, Diego Lopez, Susan Hares, "Security Management Automation of Cloud-Based Services in I2NSF Framework", draft-jeongi2nsf-security-management-automation-04.txt (Individual Draft, July 2022).
- Jethanandani, Mahesh, Keyur Patel, Susan Hares, and Jeff Haas. "BGP Yang Model for Service Provider Networks", draft-ietf-idr-bgp-model-15.txt (WG Draft, October 2022).
- Jinyong, Tim Kim, Paul Jaehoon Jeong, Park Jung-Soo, Susan Hares, Qiushi Lin, "I2NSF Network Security Function-Facing Interface Model", draft-ietf-i2nsf-nsf-facing-interface-dm-29 (pending RFC, June 2022).
- Kim, Jeonghyeon, Paul Jaehoon Jeong, Patrick Lingga, Susan Hares, Rafel Marin-Lopez, "I2NSF Security Controller-Facing Interface Yang Data Model for Cross-Domain IPSec Flow Protection", draft-kim-i2nsf-security-controller-interface-dm-00 (Individual draft, October 2022).

- Liang, Qiandeng, Susan Hares, Jianjie You, Robert Raszuk, and Da Ma. "Carrying Label Information for BGP FlowSpec", URL: <u>https://tools.ietf.org/html/draft-ietf-idr-bgp-flowspec-label-02.txt</u> (WG draft, 2022)
- Yong, Lucy, Susan Hares, Qiandeng Liang, and Jianjie You. "BGP Flow Specification for MPLS Label". URL: <u>https://tools.ietf.org/html/draft-ietf-idr-flowspec-mpls-match-02</u> (WG draft, 2022)
- Zhang, Jeffrey and Susan Hares, "MPLS Label Stacks in Tunnel Encapsulation Attribute", draftzzhang-idr-tunnel-encpasulation-label-stack-01.txt (Individual Draft, October 2022).

#### Patent Applications (2003-2015)

- Bhandaru, Nehru, Michael Cook, Webster Gaidos, Susan Hares, Owais Hassan, Michael Carrafiello, Albert Lew, David Morris, Martin Mueller, and Michael Vakulenko. "Secure, standards-based communications across a wide-area network." U.S. Patent Application 10/982,598, filed November 4, 2004.
- Chu, Wenjing, Bisong Tao, Allan Rubens, Andrew Adams, James Qiuming Li, and Susan Hares. "Remote management of communication devices." U.S. Patent Application 11/121,163, filed May 2, 2005.
- Chu, Wenjing, James Li, Ravi Manghimalani, Bisong Tao, and Susan Hares. "Virtualization of control software for communication devices." U.S. Patent Application 11/121,162, filed May 2, 2005.
- Hares, Susan. "Establishment and enforcement of policies in packet-switched networks." U.S. Patent Application 10/648,141, filed August 25, 2003.
- Hares, Susan. "Establishment and enforcement of policies in packet-switched networks." U.S. Patent Application 11/881,231, filed July 25, 2007.
- Hares, Susan. "Systems and methods for routing employing link state and path vector techniques." U.S. Patent Application 10/648,758, filed August 25, 2003.
- Hares, Susan. "Nested components for network protocols." U.S. Patent Application 10/648,146, filed August 25, 2003.
- Hares, Susan. "Systems and methods for combining and extending routing protocols." U.S. Patent Application 10/966,075, filed October 14, 2004.
- Hares, Susan. "Systems and methods for combining and extending routing protocols." U.S. Patent Application 10/966,075, filed October 14, 2004.
- Hares, Susan. "Systems and methods for virtual broadcast subnetworks." U.S. Patent Application 11/056,925, filed February 11, 2005.

- Hares, Susan K., and Nehru Bhandaru. "Wireless mesh routing protocol utilizing hybrid link state algorithms." U.S. Patent 7,856,001, issued December 21, 2010
- Hares, Susan, and Pratik Bose. "BGP dynamic AS renumbering." U.S. Patent Application 11/354,289, filed February 13, 2006
- Hares, Susan, Joseph Chen, Choon Lee, and Ravi Manghirmalan. "Layer 2 virtual switching environment." U.S. Patent Application 11/347,834, filed February 2, 2006.
- Hares, Susan K., Allan C. Rubens, and Andrew Adams. "Highly available virtual stacking architecture." U.S. Patent Application 12/397,302, filed March 3, 2009.
- Hares, Susan, and John Tavs. "Systems and methods to support quality of service in communications networks." U.S. Patent Application 10/944,398, filed September 16, 2004.
- Lee, Young, Yangsong Xia, and Susan Hares. "Method and system for cross-stratum optimization in application-transport networks." U.S. Patent 8,909,786, issued December 9, 2014.
- Mack-Crane, T. Benjamin, Susan Kay Hares, and Charles E. Perkins. "Linked Identifiers for Multiple Domains." U.S. Patent Application 14/059,055, filed October 21, 2013.
- Dunbar, Linda, Susan Hares, T. Benjamin Mack-Crane, Robert Sultan, Peter Ashwood-Smith, and Guoli Yin. "Layer Two Over Multiple Sites." U.S. Patent Application 14/689,911, filed April 17, 2015.

# **STANDARDS ACTIVITY**

#### **Present:**

#### **IEEE Global Internet Symposium Technical Committee 2017**

#### **IETF** (Internet Engineering Task Force)

Co-chair of the IETF Inter-Domain Routing Working Group, 1998 – present. Co-Chair of the IETF Interface to Routing System Working Group, 2014-present Co-Chair of the IETF Transparent Links Interconnection of Lots of Links, 2014-present Member of the Area directorates in routing area and operations/network

#### ILA (International Leadership Association)

Member of the MIGS (member interest groups) for Public Leadership, Leadership Scholarship, Leadership Education, Women & Leadership,

Member of Learning Community: Doctoral Program Faculty and Leaders

#### Past Work (1987-2015)

#### **Technical Program Committee(s)**

Infocom Workshops 2021 – Paper review

IPOP 2015, Technical Program Committee

MILCOM 2013 Technical Program Committee Member

IEEE SECON Technical committee: <u>http://www.ieee-secon.org/2006/index.html</u> [SECON 2006] Invitation to join technical program committee

#### **IEEE:**

**802.1** – Active in **management issues** 

**802.11-** Active in 802.11s as part of the Wire-Mesh proposal and merge of the Joint SeeMesh Wi-Mesh Proposal.

#### **Network Processor Forum (www.npforum.org) : (2003-2004)**

Contributed to the Software APIs providing contributions for: IPv4 and IPv6 Unicast Forwarding Service API (June 2004) FAPI Model and Usage Guidelines (October 2004)

#### Internet2: (1998-2001)

Participate in the Internet2 QOS working group, QIG, Bandwidth Broker Advisory Council

# Professional Conferences – Presentation, Papers and resulting trade journal articles

#### **2016 Conference Proceedings**

- Hares, Susan. 2016. "Linking Intent-Based Networking to IETF Flow-Based Policy", iPOP 2016, conference website: <u>http://www.pilab.jp/ipop2016/info/onlineproceedings.html</u>, item P-4,
- Hares, Susan. 2016. "IETF Flow Specification in BGP, ISIS, I2RS and Policy Routing", iPOP 2016, conference website: <u>http://www.pilab.jp/ipop2016/info/onlineproceedings.html</u>, item P-6.
- Hares, Susan. 2016. "Utilizing I2RS to Control SDN and NFV Networks", iPOP 2016, conference website: <u>http://www.pilab.jp/ipop2016/info/onlineproceedings.html</u>.
- Hares, Susan. 2016. "Utilizing I2RS to Control SDN and NFV Networks", iPOP 2016, conference web site: <u>http://www.isocore.com/2016/technical\_sessions.htm</u>, October 19, 8-10:00am sessions.
- Hares, Susan. 2016. "Upcoming Changes to BGP Flow Specification.", NANOG 68, conference web site: https://www.nanog.org/meetings/nanog68/agenda

#### 2015 Conference Proceedings and non-peer reviewed Journals

Hares, Susan. 2015. "Intent Based Nemo", Intent Networking Summit 2015, Palo Alto, CA. (HP sponsored, private website), write-up on Summit:

https://www.sdxcentral.com/articles/contributed/network-intent-summit-perspective-marc-cohn/2015/02/

- Hares, Susan. 2015. "Intent-Based Networking and the Common Northbound API Framework", ONS2015, ONF/SDN Market Opportunities Tutorial. Conference site: <u>http://opennetsummit.org/2015-archive/agenda/tutorials/#Marketopportunities</u>
- Hares, 2015. 2015. "Open Network Hypervisor: Network Virtualization Enabler", NFV & SDN Summit, http://www.uppersideconferences.com/nfvsdn/nfv\_sdn\_2015\_agenda\_conference\_day\_3.html
- Hares, Susan. 2015. "Intent Based NeMo", iPOP 2015, conference presentations: http://www.pilab.jp/ipop2015/info/onlineproceedings.html,
- Hares, Susan. 2015. "Historiometric Study of Early Church Leaders' Inter-Church Conflict Resolution Process", International Leadership Association Conference 2015, <u>http://www.ila-net.org/conferences/2015/program.html</u>.
- Hares, Susan. 2015. "Historiometric Methodology to Analyze First Century Greek Texts on Church Leadership", International Leadership Association Conference 2015, Emerging Scholar Poster, <u>http://www.ila-net.org/conferences/2015/program.html</u>.
- Hares, Susan. 2015. "Does Theology Impact Decision-Making by the Leadership of a Software Company?", International Leadership Association Conference 2015, <u>http://www.ila-net.org/conferences/2015/program.html</u>.
- Hares, Susan. 2015. "Differences in American and Chinese Decision-making in Strategic Management Teams", International Leadership Association Conference 2015, http://www.ila-net.org/conferences/2015/program.html.
- Kohei Shiomoto, Hares, Susan, Malathi Veeraghavan, Hiroaki Harai, Xiaoyuan Cao, Satoshi Kamiya, & Hidenori Inouchi. 2015. "Management Issues in SDN/NFV era – What can we learn from cloud management and DevOps?", conference presentations: <u>http://www.pilab.jp/ipop2015/info/onlineproceedings.html</u>
- Wijnen, Bert, Pedro A. Aranda Gutierrez, Susan Hares, & Tianran Zhou. "Intent-Based Network Modeling", IETF Journal, https://www.ietfjournal.org/intent-based-network-modeling/

#### **2014 Conference Proceedings**

- Hares, Susan. 2014. "Consensus Decision-making Model with Solidarity Antecedents", Tobias Leadership Conference 2014, Poster presentation.
- Hares, Susan. 2014. "Consensus Decision-making: An Empirical Mixed Mode Study", International Leadership Association Conference 2014, Emerging Scholar Poster. <u>http://www.ila-net.org/conferences/2014/</u>

- Hares, Susan. 2014. "Open Network Hypervisor", Carrier Network Virtualization Conference 2014, Palo Alto, CA.
- Hares, Susan. 2014. "NeMo -An Application API for Intent Driven Networking", Carrier Network Virtualization Conference 2014, Palo Alto, Ca.

#### **2013 Conference Proceedings**

- Hares, Susan. 2013. "Consensus Decision Making with Solidarity Antecedents: Early Data", 2013 Regent University Annual Roundtables of Leadership Research & Practice.
- Hares, Susan. 2013. "Carrier Network Transformation Through E2E NFV", Session Network Function Virtualization, SDN Summit 2013, conference agenda: http://www.uppersideconferences.com/sdnsummit2013/sdn2013program\_conference e\_day\_1.html

#### 2012 Conferences Proceedings and Journals (non-peer reviewed)

- Hares, Susan. 2012. "E-Tree VPN for Private Cloud Computing. MPLS & Ethernet World Congress 2012, February 7, 2012. , agenda: <u>http://www.uppersideconferences.com/pdfmplsworld2012/files/programmpls2012\_03\_02\_opt.pdf</u>
- Jacquenet, Christian, Susan Hares, Tina Tsou, X.Deng, X. Huang, Y. Ma. 2012. "Demonstrating IPv4 Multicast Service Continuity During IPv6 Migration", the IETF Journal, <u>https://www.ietfjournal.org/demonstrating-ipv4-multicast-service-continuity-during-ipv6-migration/</u>

#### **2011 Conference Proceedings**

- Linda Dunbar, Sue Hares, Murari Sridharan, Narasimhan Venkataramaih, and Benson Schliesser. 2011. ARMD (Address Resolution for Massive number of hosts in data center) Problem statements. URL: <u>https://www.ietf.org/proceedings/80/slides/armd-0.pdf</u>
- Rajiv Papneja, Susan Hares, Bhavani Parise, Mohan, Nanduri, Jay Karthik, and Eric Brendel. 2011. "Basic BGP Data Plane Convergence Benchmarking". URL: <u>https://www.ietf.org/proceedings/80/slides/bmwg-6.pdf</u>
- Susan Hares, 2011. Report from NANOG-52 on ARMD. URL: https://www.ietf.org/proceedings/81/slides/armd-1.pdf

#### **2010 Conference Proceedings**

Linda Dunbar, Sue Hares, Murari Sridharan, Narasimhan Venkataramaih, and Benson Schliesser.

2011. ARMD (Address Resolution for Massive number of hosts in data center) Problem statements. ARMD BOF (Birds of a Feather), URL: https://www.ietf.org/proceedings/79/slides/armd-1.pdf

#### **2006 Conference Proceedings**

Hares, Susan. 2006. "VPLS in a Wired and Wireless Environment", February 10<sup>th</sup>, 2006, MPLS World Congress 2006, Conference: http://www.upperside.fr/mpls2006/mplsworld2006intro.htm

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