

Bright Internet Global Summit 2018 @ San Francisco

(BIGS2018@SF: Version 10.0 – 11/30)

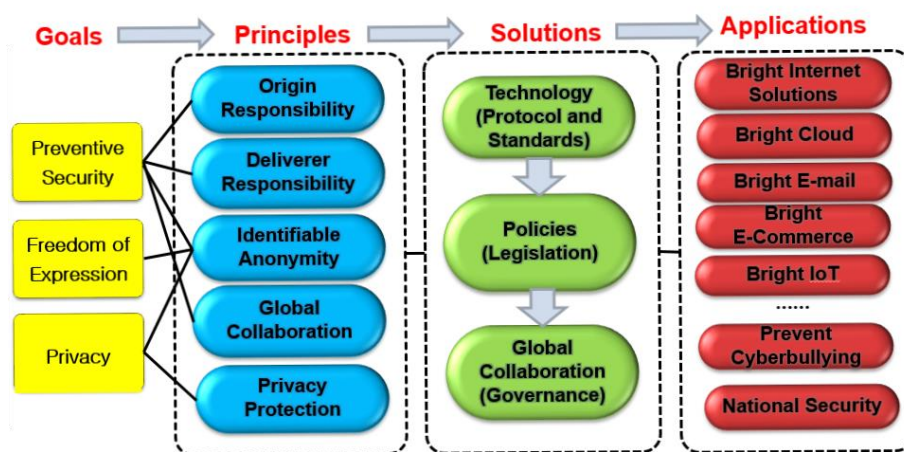
December 12-13th in San Francisco, USA

1. What is Bright Internet

Bright Internet is proposed as a preventive cybersecurity paradigm of reducing the threat from malicious origins, in contrast with the current self-centric defensive cybersecurity paradigm at receiver sites. For this purpose, the principles of origin responsibility and deliverer responsibility on a global scale are adopted. However, these preventive security-related principles may hinder the freedom of anonymous expression. Thus, the principle of identifiable anonymity is adopted in order to allow the freedom of anonymous expression for innocent netizens, also enabling the traceability and identifiability of malicious origins. In addition, the preventive security schemes should not infringe the privacy of innocent netizens without valid search warrants. All these principles should be implemented globally with adequate collaboration mechanism.

The implementation of these principles requires technologies and system, national policies and international agreements, and global collaboration as depicted in the following diagram [Lee et al. 2018]. We believe the Preventive Cybersecurity Paradigm can be a disruptive technology of current cybersecurity solutions, but it requires not only technologies, but also national policies and international collaboration.

We believe that the propagation of Bright Internet can dramatically reduce the risk of cyberattacks, privacy infringement, fake news, and so forth. The architecture of Bright Internet can provide a foundation of designing and developing the next generation Internet with security and trust. Materials on vision and progress can be found at www.brightinternet.org.



2. What is the Bright Internet Global Summit

The vision of Bright Internet was first adopted and announced by the Council of Association of Information Systems under the Grand Vision of ICT-enabled Bright Society. The notion of Bright Internet was presented in keynote speeches and panels at many AIS Conferences such as the International Conference on Information Systems (ICIS), Pacific Asia Conference on Information Systems (PACIS), European Conference of Information Systems (ECIS), American Conference of Information Systems (AMCIS), International Conference of Electronic Commerce (ICEC), Workshop of AIS SIG Information Security and Privacy (WISP), and the IFIP Security, ACM/IEEE Cloud Computing, and many others. However, it was necessary to hold a dedicated meeting, thus the first Bright Internet Global Summit was held on December 8-10th of 2017 in Seoul, Korea as a pre-ICIS Workshop.

The Bright Internet Global Summit (BIGS) is a global forum of exchanging the vision and research progress and outcomes on various issues of Bright Internet. It will become also a channel to derive agreements among stakeholders and member countries for mutual benefits which cannot be realized by a single country alone. Stakeholders include individual researchers, research institutions, companies represented by business leaders and practitioners, academic institutions, government agencies, legislators, standard organizations, and international organizations.

The national symposiums with global perspective such as Bright Internet China Symposium (BICS) were held at Xi'an Jiaotong University at Xi'an in June 2017, and at Tsinghua University at Beijing in June 2018. Korea has also held a number of workshops on Bright Internet. The approved version of previous presentation materials can be downloaded at www.brightinternet.org.

The next regular BIGS will be held at San Francisco in 2018, Munich in 2019, and New Delhi in 2020 along with the International Conference on Information Systems. BIGS may be held in other occasions possibly with PACIS and other conferences, or as an independent event when necessary. For any inquiries on hosting BIGS and national symposiums, contact jkleee@kaist.ac.kr.

3. BIGS2018@SanFrancisco: Overview

The Bright Internet Global Summit 2018 at San Francisco is the continuation of BIGS2017 in Seoul and BICS2018 in Beijing and will be held on December 12 (Day 1) and 13th (Day 2) as a pre-ICIS2018 Workshop in the Marriot Marquis Hotel in San Francisco.

1) For the Industry and Policy Participants

Day 1 meeting will be dedicated to practical industry experts and policy makers, and open to non-AIS members. However, ICIS registered members of AIS are of course welcome to attend at a discounted fee.

The themes of BIGS2018@SF are described in the program. This workshop will be a good opportunity to learn the trend and issues of the Bright Internet Initiative and the approaches for preventive cybersecurity paradigm and business development. It will be also a good opportunity to meet the key players of Bright Internet and participate in the Q&A, discussions, and networking.

[**Call for Presentation and Discussion**] The key speakers are primarily invited speakers including prominent researchers, industry frontiers and policymakers. However, to open the chance of qualified volunteer's presentation and discussion, we welcome the submission of the Application for Presentation and Discussion. Applicants should submit his/her presentation and discussion title, short abstract and CV to Jae Kyu Lee (jkleee@kaist.ac.kr).

2) For Academic Participants

Day 2 is dedicated to academic research presentations and discussions and open only to AIS members. Day 2 will be held as a track of the Workshop of Information Security and Privacy (WISP) of AIS SIG-SEC (Security and Privacy). AIS members can register for both days at a discounted fee. But the Bright Internet track will be recognized in the www.brightinternet.org as well.

To present on Day 2, authors need to submit an extended abstract or full paper according to the Call for Papers. Topics on Day 2 are not limited to the topics of Day 1 as long it fits the vision of Bright Internet.

4. BIGS 2018 Organizer

- A. US-Asia Technology Management Center, Stanford University
- B. Bright Internet Research Center, KAIST
- C. AIS SIGSEG - Workshop on Information Security and Privacy (WISP)

5. BIGS 2018 Committee

- A. **Conference Chairs:** Richard Dasher (Stanford U), Anat Zeelim-Hovav (Immediate Past President of AIS SIGSEC), Jae Kyu Lee (Southern University of Science and Technology)
- B. **Program Chairs:** Jane Fedorowicz (Bentley University, Past President of AIS), Christopher Paolini (San Diego State University), Dan J. Kim (University of North Texas)
- C. **Organizing Chairs:** Briana Burrows (Stanford University), Bongsik Shin (San Diego State University), Daegon Cho (KAIST)
- D. **Program and Organizing Committee**
 - 1) Gene Moo Lee (University of British Columbia)
 - 2) Victoria Yoon (Virginia Commonwealth University)
 - 3) Zhangxi Lin (Texas Tech University)
 - 4) Jun Bi (Tsinghua University, China; Chair of Bright Internet China Symposium 2018)
 - 5) Gyoo Gun Lim (Hanyang University, Korea)
 - 6) Jaehyeon Ju (McGill University, Canada)
 - 7) Jiyong Park (KAIST, Korea)
- E. **Advisors**
 - 1) David Farber (Carnegie Mellon University and Keio University)
 - 2) Wei Huang (Xi'an Jiaotong University, China; Chair of Bright Internet China Symposium 2017)
 - 3) Helmut Krcmar (Technical University of Munich: BIGS2019 Co-Chair)
 - 4) Ritu Agarwal (University of Maryland: BIGS2019 Co-Chair)
 - 5) Joey George (Iowa State University: BIGS2020 Co-Chair)
 - 6) Raghav Rao (University of Texas, Saint Antonio: BIGS2020 Co-chair)

6. Program of BIGS2018@SF for Day 1 (December 12th, 2018)

The primary themes of BIGS2018@SF for practitioners track on December 12th investigate the following questions in each session. A separate registration page for December 12th (Day 1) will be available in www.brightinternet.org.

Overall Theme: Deployment Strategies of the Bright Internet

A. Bright Internet and Paradigm Shift of Cybersecurity and Privacy

What should we do to make the cyberspace safe fundamentally? To prevent the risk of cybercrimes and malicious behaviors from the threat sources, what should the design goals of future Internet be? What are key privacy issues and how can we reconcile the issues of privacy with preventive cybersecurity? What should be the architecture of Bright Internet with applications? What are the potential of new businesses opportunities in this endeavor, and what is and should be the national policies?

Session Chair: Mark Cummings, CTO of Bace Cyber Security Institute, and Bongsik Shin, San Diego State University

- 1) **Goals and Global Progress of Bright Internet** (Jae Kyu Lee, Southern University of Science and Technology; Founder of the Bright Internet Vision)
- 2) **Economics and Behavioral Aspect of Privacy in Designing Future Internet** (Alessandro Acquisti, Heinz College, Carnegie Mellon University)
- 3) **What Should We Consider for the Next Generation Internet?** (David Farber, Director, Cyber Civilization Research Center, Keio University; Distinguished Career Professor, Carnegie Mellon University)

B. Designing Next Generation Internet with the Bright Internet

Should the protocol of future Internet fundamentally consider the cybersecurity? Can the principles of Bright Internet provide an alternative for future Internet? What other alternatives do we have? What are the available technologies that can be adopted for the implementation of Bright Internet? Can IPv6 and SAVA (Source Address Validation Architecture) be solutions for the identifiable anonymity? What new technologies and services need to be developed further and what kind of global collaboration should be made? Who can take advantage of the new business opportunities?

Session Chair: Chris Paolini, San Diego State University

- 1) **Can the IPv6 realize the Bright Internet: CERNET Experience?** (Xing Li, Professor of Tsinghua University, Deputy Director of CERNET Research Center)

- 2) **Best Practices and New Architecture Designs for the Secure Future Internet** (John Hess of CENIC, California, USA)
- 3) **How Can We Move Peta-Scale Data over KREONET?** (Jeonghoon Moon, Korea Institute of Science and Technology Information)
- 4) **Do the Vision of Future Internet Projects Coincide with that of the Bright Internet?** (Chris Paolini, Professor of San Diego State University)

C. Measuring and Motivating Origin Responsibility and Trust

To change the cybersecurity paradigm from self-defensive protection to the preventive elimination of threat sources, we need to take into account origin and deliverer responsibility. How can we measure the trust and responsibility levels of origins and deliverers with the destination matrix? How can we motivate the origins to be more trustworthy and thus reduce cyberattacks including phishing? Who can become key players in this business?

Session Chair: Gene Moo Lee, University of British Columbia

- 1) **CybeRatings: An origin responsibility measurement framework using spam and phishing data** (Yun-Sik Choi, University of Texas at Austin)
- 2) **How to incentivize firms to adopt anti-identity theft countermeasures?** (Alvin Leung, City University of Hong Kong)
- 3) **How can we mitigate the origins and delivery of phishing attacks?** (Foy Shiver, Anti-Phishing Working Group, Atlanta, Georgia)

D. Bright Internet Business Models for Cloud, e-mails and Portal Services

Are the cloud and e-mail services abused as a source of cybercrimes, and did the portal spaces mislead the societal opinions? How serious are these problems and how to fight against them? Can the Principles of Bright Internet fundamentally ameliorate these problems? How were the bots abused to distort political issues? Can the Bright Internet based cloud, e-mail and portal be market driven business models? What are the real world cases with this perspective?

Session Chair: Dan J. Kim, University of North Texas

- 1) **How to Fight Cybercrimes on the Cloud?** (Mari Heiser, IBM Cloud)
- 2) **Bot-Driven Opinion Rigging Scandal: Druking Experience on a Portal Naver in South Korea** (Sangpil Han, Arizona State University)

- 3) **Concept and Practices of the Bright eMail and Bright Cloud** (Jae Kyu Lee, Southern University of Science and Technology, and Dan J. Kim, University of North Texas)

E. Balancing Preventive and Protective Cybersecurity Paradigm

How can we balance the Preventive and Protective Paradigms in Cybersecurity, Privacy, and Fake News? How can we reduce the threat of fake news by adopting the principles of Bright Internet? What should be the technologies and policies of next cybersecurity research and deployment? What can be the new research and business opportunities?

Session Chair: Ramayya Krishnan, Dean of Heinz College, Carnegie Mellon University, President-elect of INFORMS

- 1) **How Can We Reduce the Threat of Fake News?** (David Murungi, Bentley University)
- 2) **How to Create Synergy of Preventive Paradigm and Protective Paradigm?** (Anat Zeelim-Hovav, Immediate Past President of AIS SIGSEC)
- 3) **Enhancing Trust of Sharing Economy using the Bright Internet Platform** (Jean-Henry Morin, University of Geneva)

7. Program of BIGS2018@SF: Day 2 for Academic Researchers

Call for Papers

The Bright Internet Global Summit (BIGS) will be held at the Marriott Marquis hotel in San Francisco December 12-13, 2018. Day 1 meetings for BIGS 2018 on December 12th are dedicated to practical industry experts and policy makers and open to non-AIS members. These sessions will provide an interactive forum by bringing together leading academics, practitioners and policy makers to discuss the critical issues of today's Internet and possible means and business models to realize the next generation of a trusted and safe Internet, including Bright Internet Initiative and approaches for preventive cybersecurity paradigm and business development.

Day 2 sections for BIGS 2018 on December 13th, as a pre-ICIS workshop, are dedicated to academic research paper presentations and discussion and open to AIS members. The Day 2 sessions will be held in cooperation with the AIS Special Interest Group on Information Security and Privacy (SIGSEC) as a part of the Workshop on Information Security and Privacy (WISP 2018). Information on BIGS 2018 for both days can be found at www.brightinternet.org.

This call for papers for the academic track for Day 2 (December 13th) invites original research articles addressing a broad coverage of technical, managerial, economic, and policy solutions towards developing the Bright Internet and Trust, with emphasis on preventive cybersecurity and global trust building. Papers may employ any applicable IS research method (case study, survey, analytical modeling, experiments, computational models, design science, and so forth). The key issues to be discussed at the BIGS 2018 academic forum include, but are not limited to, the following:

- What are the most serious cybersecurity issues currently encountered by companies, individual citizens, and on national levels (national security) and what can be done about these issues?
- Is the current Internet security protection paradigm sustainable for the future?
- Do we need a new preventive paradigm for deterring anonymous sources of threat?
- What should the security architecture and protocols look like for the future Internet?
- What are critical success factors for the market driven bright cloud networks?
- What kind of protocols and technologies are necessary to implement Bright Internet?
- How serious are cross-border and detoured cyberattacks?
- What is the status of global cybersecurity, security governance in the context of the Bright Internet initiative?
- What should the goals be of the next generation Internet, and what are the principles that Bright Internet should adopt?
- What kind of regulations need to be established or released to realize the goals of Bright Internet?
- What would be novel, useful methodological approaches to establish the Bright Internet?
- What new research propositions, frameworks, theories, and paradigms surrounding the Bright Internet should we focus on for the next 10 years?

Important Dates

Submission Deadline: September 30, 2018

Notification of Acceptance: October 26, 2018

Revised, Camera ready Document: November 30, 2018

Workshop Date: December 13, 2018

Submission Guidelines

All submitted papers undergo a double-blind peer-review process. Please submit your papers using our conference submission system located at <https://easychair.org/cfp/WISP2018>. **Please add “(Submit to BIGS)” at the end of paper title.** All submission should be in Microsoft Word using the workshop template only (found on the submission website), with no author names or other identification in the manuscript file, including removal of document properties and tracked changes (blind the submission, please). Please use the WISP2018 style for your paper and references (also shown on the workshop template). Completed research and case study papers should be limited to 15 pages. Research-in-progress papers should be limited to 8 pages. The accepted papers will be presented on Dec. 13th during the research paper section of the WISP, and detailed presentation guideline will be provided later. We look forward to receiving your papers. If you have any questions, please contact Dan J. Kim at dan.kim@unt.edu.

Academic participants for Day 2 of BIGS 2018 December 13th should register for WISP 2018 of pre-ICIS 2018. If AIS member wants to participate in the practitioner sessions for Day 1, it will require a separate registration at www.brightinternet.org with an AIS member discount.

Program Chairs

Dan J. Kim,	University of North Texas, USA
Jae Kyu Lee	Southern University of Science and Technology, China
Michele Maasberg	Louisiana Tech University, USA

Program Committee

Bongsik Shin (San Diego State University)
Christopher Paolini (San Diego State University)
Daegon Cho (KAIST, Korea)
Gene Moo Lee (University of British Columbia)
Jaehyeon Ju (McGill University, Canada)
James Parrish (University of North Texas)
Jingguo Wang (University of Texas at Arlington)
Manoj Thomas (Virginia Commonwealth University)
Mehrddad Koohikamali (University of Redlands)
Mohammad Salehan (California State Polytechnic University)
Mohammadreza Mousavizadeh (Western Michigan University)
Obiageli Ogbanufe (Oklahoma State University)
Raghu Santanam (Arizona State University)
Richard Dasher (Stanford University)
Rui Chen (Iowa State University)
Ugochukwu Etudo (University of Connecticut)
Victoria Yoon (Virginia Commonwealth University)
Vijayan Sugumaran (Oakland University)
Zhangxi Lin (Texas Tech University)