ICIS 2015 출장 결과 보고서

Dec 12~16, 2015

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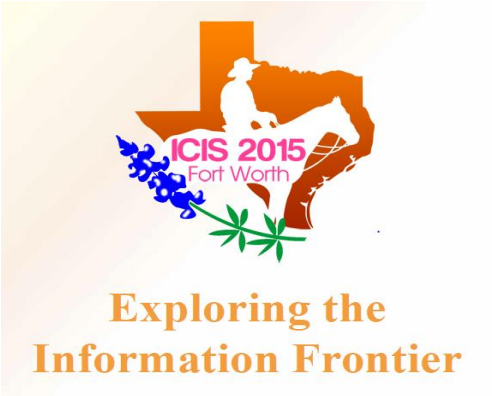
Introduction of ICIS : What is ICIS ?

http://aisnet.org/?ICISPage

- ICIS (International Conference on Information Systems) is the most prestigious gathering of IS academics and research-oriented practitioners in the world
- It is the flagship annual conference of the Association for Information Systems (AIS), which has over 4,000 members representing universities in over 95 countries worldwide
- Each year, over 1,000 IS academic professionals from around the world participate in the conference program, which includes about 60 sessions and 180 presentations, in addition to keynotes, CIO and research panels. ICIS convenes annually to present scientific papers and to examine the constantly changing field of Is theory and practice
- The conference provides a forum for networking and sharing of latest ideas and highest calibre scientific work amongst the IS profession
- It presents a unique opportunity meet one of the most influential audiences in the field of information systems

The Schedule of Conference

- 장소: Fort Worth Convention Center, Fort Worth, Texas, USA
- 일정 : Dec 12-16, 2015
  - 12/11 : 이동 (출국)
  - 12/12 ~ 12/16 : ICIS 컨퍼런스 참석 및 논문발표
    - ✓ 12/12: AISWN Pre-ICIS Workshop on Advancing Women in IS 참석
    - ✓ 12/13: Data Analytics (Watson & Bluemix) Workshop 참석
    - ✓ 12/14: Keynote I (F. Warren McFarlan), Research Paper Sessions 참석 (Information Security, Privacy and Social Networks 등)
    - ✓ 12/15: Keynote II (Tomas H. Davenport), Research Paper Sessions 참석 (CIO Symposium, Business Value in IT Ecosystems, E-Business Strategy 등)
    - ✓ 12/16: KrAIS Research Workshop 참석 및 연구논문 발표
  - 12/17(18): 이동 (귀국)

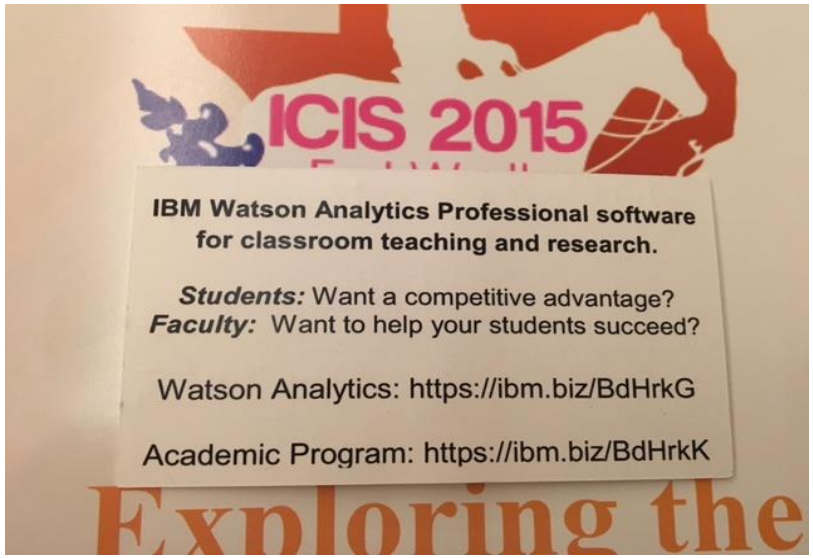


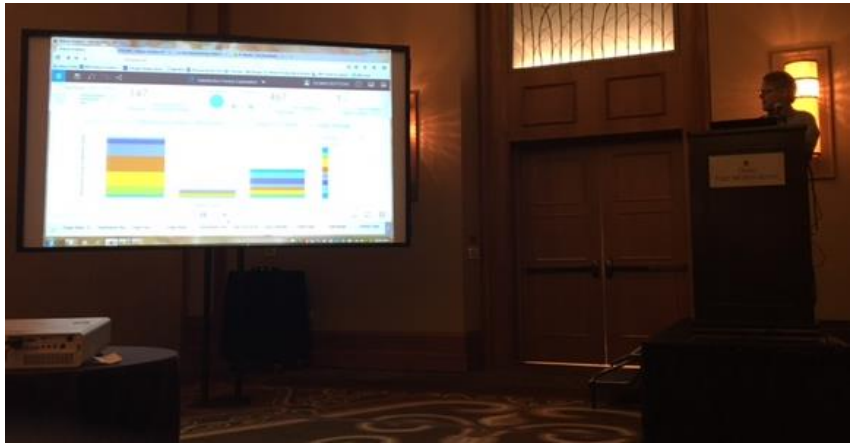
Scenes at ICIS 2015 (1/4)

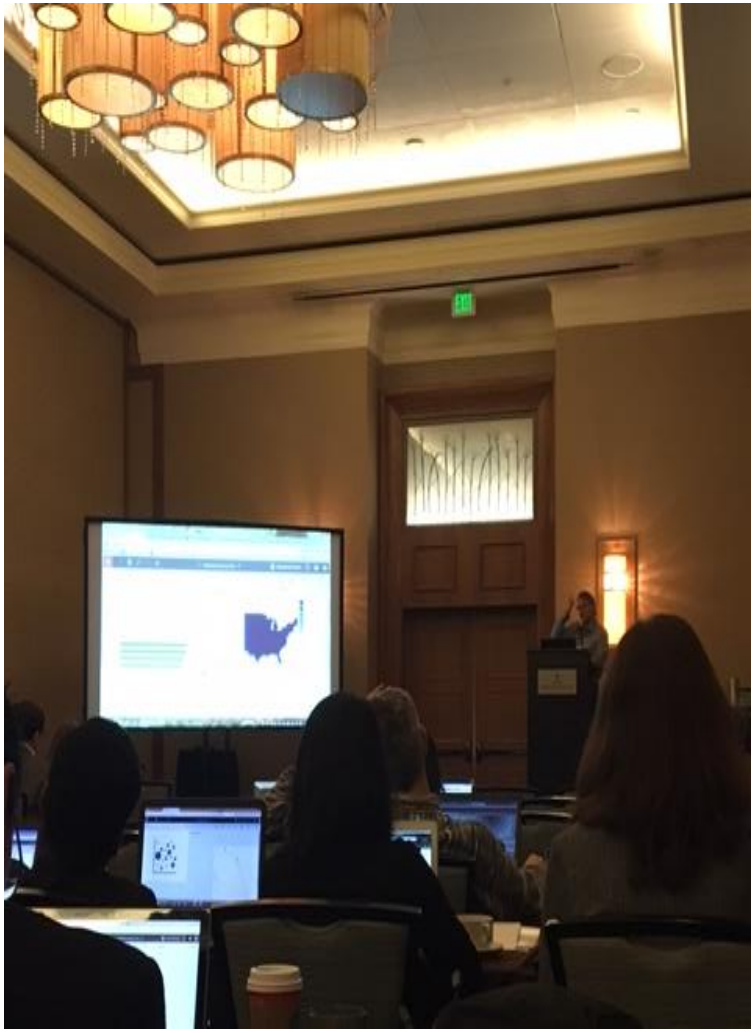
- AISWN Pre-ICIS Workshop in Dec 12, 2015

Scenes at ICIS 2015 (2/4)

- Data Analytics (Watson & Bluemix) Workshop in Dec 13, 2015

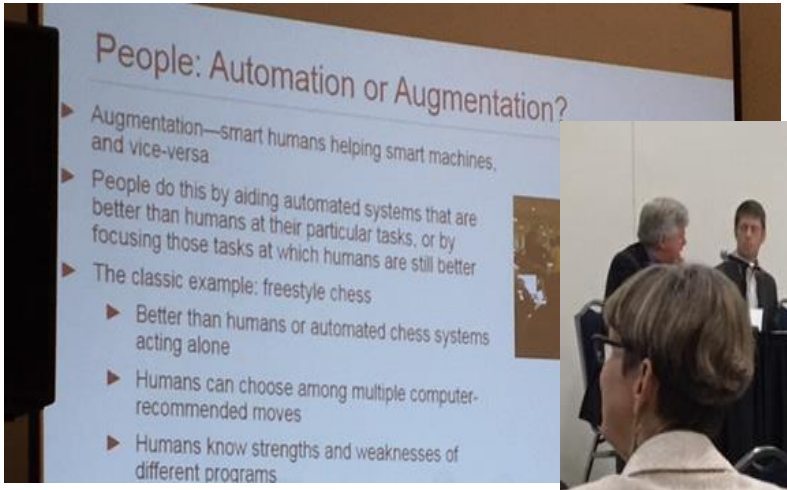


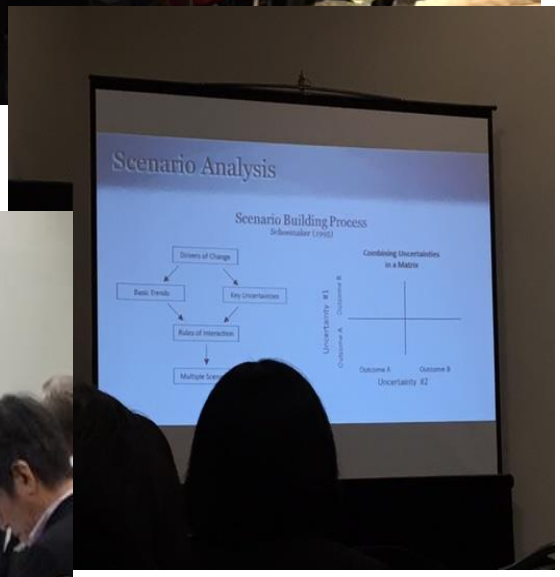




Scenes at ICIS 2015 (3/4)

- Keynote & Research Paper Sessions in Dec 14~15, 2015





Scenes at ICIS 2015 (4/4)

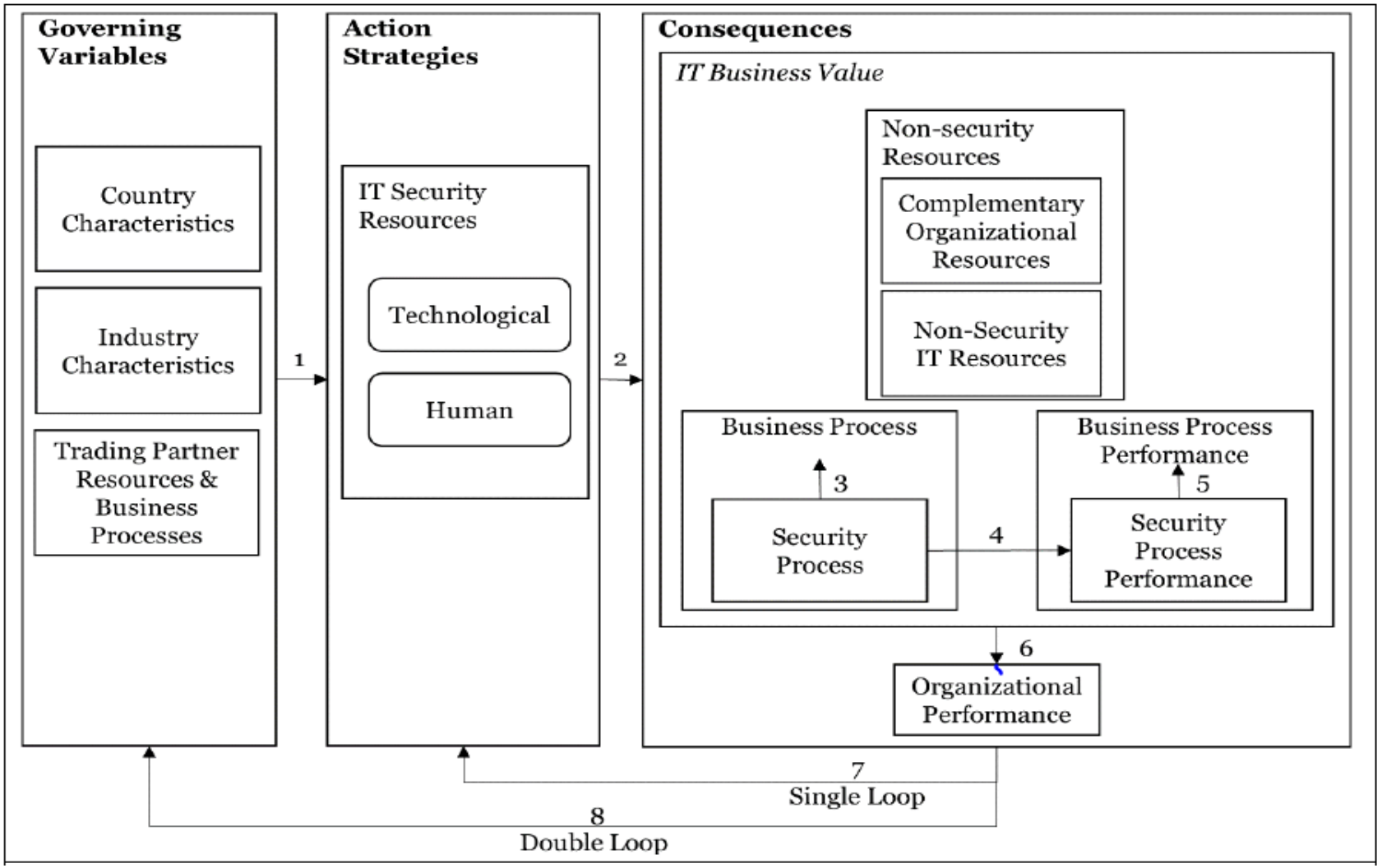
- KrAIS Research Workshop in Dec 16, 2015

Interesting Paper in ICIS (1) - Information Security Investment Model 연구 (1/3)

- 연구 제목 : A Multi-Theoretical Literature Review on Information Security Investments (ISI) using the Resource-Based View (RVB) and the Organizational Learning Theory (OLT)
- 저자 : Eva Weishäupl, Emrah Yasasin, & Guido Schryen (at University of Regensburg)
- 주요 내용 및 특징
  - ✓ Multi-Theoretical Literature Review를 통해 Information Security Investments에 대한 향후 연구 Model 제시
  - ✓ RVB와 OLT 이론을 통합하여 정보보호투자 연구를 위한 Integrated Framework 도출
  - ✓ 2nd Data (기존문헌) 기반 Meta Study 형태 연구
  - ✓ 정보 보호 투자 연구를 위해 살펴봐야 할 전체 Framework을 제시하고, 이를 바탕으로 현재까지 진행된 연구들을 분석한 후, 아직까지 연구가 미흡한 분야를 도출하여 이에 대한 Research Questions과 시사점을 제시함
- 상세내용 : http://aisel.aisnet.org/icis2015/proceedings/SecurityIS/16/

Interesting Paper in ICIS (1) - Information Security Investment Model 연구 (2/3)

- Integrative Model for Information Security Investments



Interesting Paper in ICIS (1) - Information Security Investment Model 연구 (3/3)

- 향후 Information Security Investment 연구분야 제언 내용

Future Research Areas	향후 연구를 위한 Research Questions
Effects of Governing Variables on security investment strategies	RQ1: Which governing variables at the national, industry and firm level affect security investment strategies in terms of sequences of investment actions?
Effects of Action Strategies on Consequences	RQ2a: How does the investments in IT security resources influence non-security resources and security processes over time with changing environmental factors? RQ2b: Depending on the learning technique, how does the relationship between action strategies and consequences evolve over time?
Effects of the Security Processes on the Business Processes and Security Process Performance	RQ3: How do security processes influence business processes and how is this influence mediated by the firm's learning strategy (single or double loop learning)? RQ4: How can the security process performance be measured and how can firms use this measurement for future information security investment decisions?
Effects of Security Process Performances on Business Process and Organization's Performances	RQ5a: How do security process performances affect business process performances? RQ5b: What and how (single or double loop learning) can firms learn from past process performance to achieve a higher security level? RQ6: What impact does security process performance have on the organizational performance?
Single Loop Learning	RQ7: How should single loop learning from past actions be designed and what is its impact on future security investment decisions after several iterations of learning loops?
Double Loop Learning	RQ8a: What are the financial and security-related incentives to establish double loop learning instead of single loop learning? RQ8b: How do security-related consequences improve over time when firms continue using double loop learning?

Interesting Paper in ICIS (2) – Privacy Valuation in Social App 연구 (1/3)

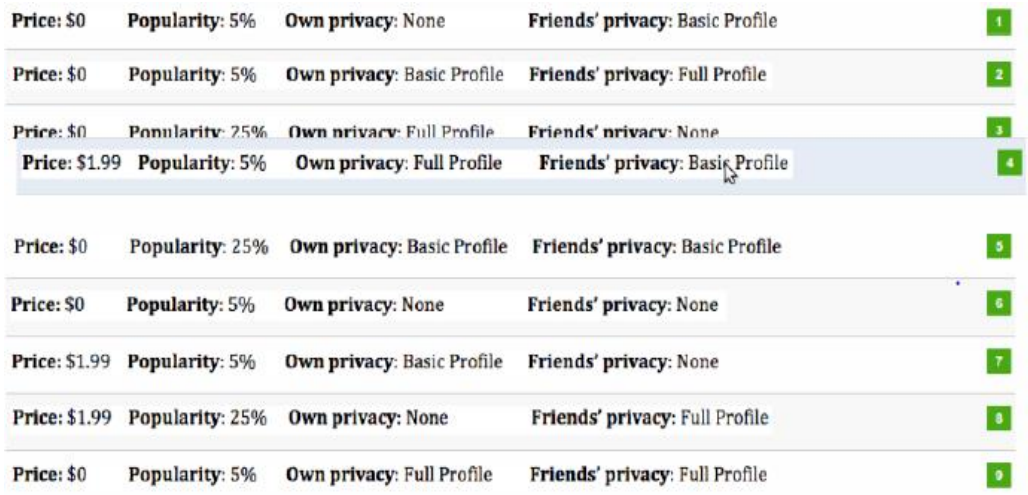
- 연구 제목 : Using Conjoint Analysis to Investigate the Value of Interdependent Privacy in Social App Adoption Scenarios
- 저자 : Yu Pu & Jens Grossklags (at Pennsylvania State University)
- 주요 내용 및 특징
  - ✓ Social App을 통해 수집/제공되는 본인의 personal information과 friends의 personal information에 대한 Valuation을 Conjoint Analysis 기법을 통해 수행함 (단, 이 연구에서는 personal information와 privacy 용어를 구분하지 않고 병용)
  - ✓ 사람들이 인식하는 (Own & Friend's) Privacy Valuation이 Social App Adoption에 미치는 영향을 분석함
    - Users behave like "privacy egoists" when making social app adoption decisions : Higher valuation for their own personal information than their friends' personal information when making app adoption choices
    - Unwarranted information requests for sensitive information are detrimental to the positive evaluation of a social app
- 상세내용 : http://aisel.aisnet.org/icis2015/proceedings/SecurityIS/12/

Interesting Paper in ICIS (2) – Privacy Valuation in Social App 연구 (2/3)

- Conjoint Study Design
  - ✓ Attributes, Attribute Levels

Attributes	Attribute Description	Attribute Levels
Price	Price of the app	$0 $1.99
Network Popularity	Percentage of a user's friends who installed the app	5% 25%
Own Privacy	Information the app collects about a user	None Basic Profile Full Profile
Friends' Privacy	Information the app collects about a user's friends	None Basic Profile Full Profile

  - ✓ 9 개 mixed versions에 대한 ranking 선택 Interface



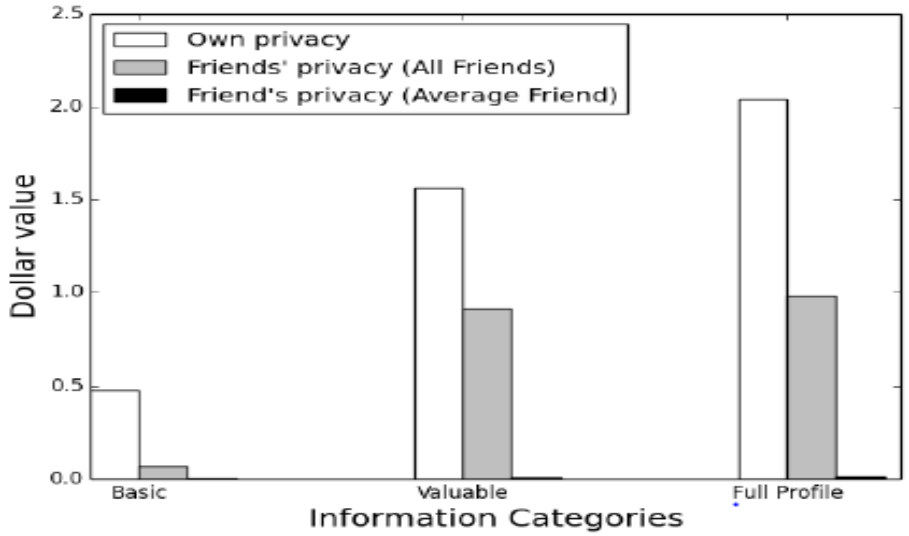
Interesting Paper in ICIS (2) – Privacy Valuation in Social App 연구 (3/3)

- Utility Change and Monetary Value of Change

Attributes	Level Change	Utility Change		Dollar Value		P-value	
		T1	T2	T1	T2	T1	T2
Price	$0.00 → $1.99	-3.25	-3.54	-1.99	-1.99	--	--
Network Popularity	5% → 25%	1.46	1.12	1.12	0.77	--	--
Own Privacy	None → Basic Profile	-0.49	-0.42	-0.55	-0.48	0.00	0.00
	Basic Profile → Full Profile	-1.79	-1.78	-1.76	-1.56	0.00	0.00
	None → Full Profile	-2.28	-2.20	-2.31	-2.04	0.00	0.00
Friends' Privacy	None → Basic Profile	-0.21	-0.06	-0.23	-0.07	0.03	0.15
	Basic Profile → Full Profile	-1.39	-1.22	-1.33	-0.91	0.00	0.00
	None → Full Profile	-1.60	-1.28	-1.56	-0.98	0.00	0.00

- Treatment 1: The information the app collects about user's friends does not improve usability or functionality of the app.
- Treatment 2: The information the app collects about user's friends improves usability or functionality of the app.

- Results of Monetary Valuation of Personal Information

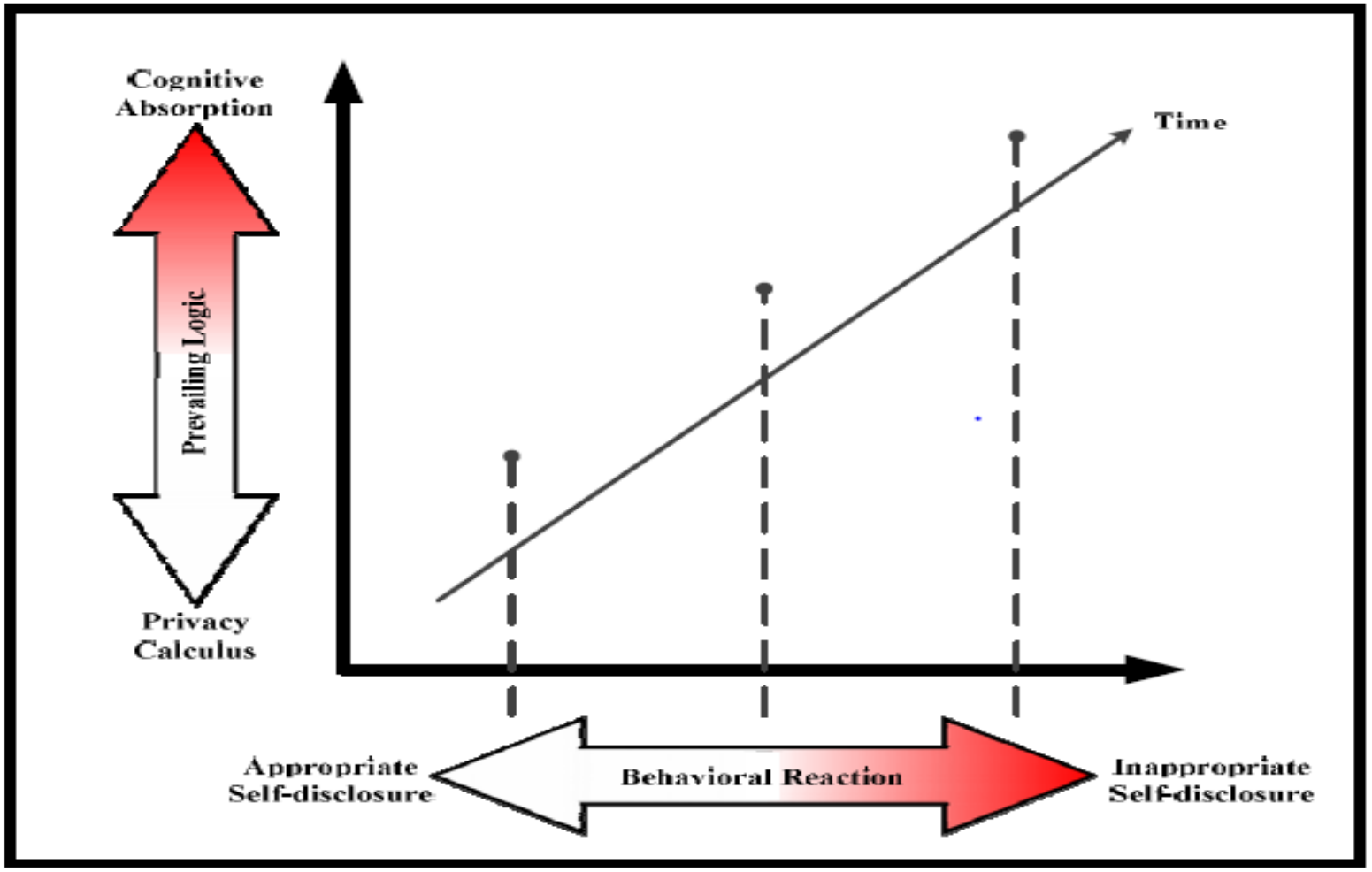


Interesting Paper in ICIS (3) – Privacy Paradox 관련 연구 (1/3)

- 연구 제목 : The Privacy Paradox - The Role of Cognitive Absorption in the Social Networking Activity *("Best Paper Nominee")*
- 저자 : Tawfiq Alashoor & Richard Baskerville (at Georgia State University)
- 주요 내용 및 특징
  - ✓ Privacy Paradox 현상을 Cognitive Absorption 이론을 통해 설명하고 Theoretical Framework 제안
    - ➢ Privacy Paradox 란: individuals express high concerns about privacy but act in a contradictory way (i.e., self-disclosure)
    - ➢ Cognitive Absorption 란: cognitive engagement (the state of playfulness)를 의미. 3가지 dimensions 포함 (intrinsic interest, curiosity, and attention)
  - ✓ "the moderating effect of cognitive absorption on the relationship between privacy concerns and self-disclosure" 제시
    - ➢ cognitive absorption is magnifying perceived benefits (e.g., social networking activity) and undermining perceived risks leading to increased self-disclosure
- 상세내용 : http://aisel.aisnet.org/icis2015/proceedings/ISstrategy/5/

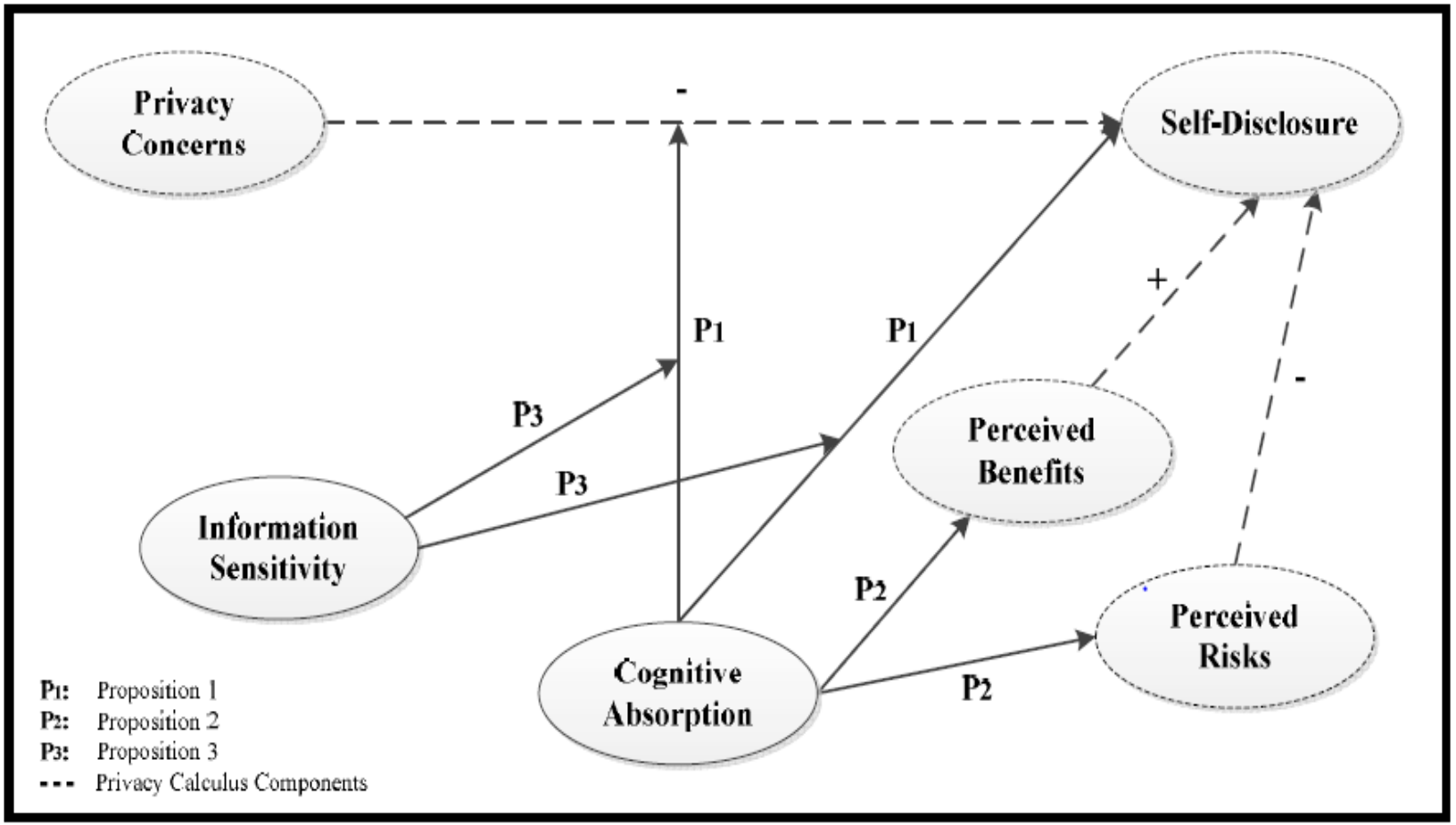
Interesting Paper in ICIS (3) – Privacy Paradox 관련 연구 (2/3)

- Reframing the Privacy Paradox and Cognitive Absorption :
  - Privacy-related Decision Making



Interesting Paper in ICIS (3) – Privacy Paradox 관련 연구 (3/3)

- Proposed Research Model
  - The effect of cognitive absorption on privacy-related decision making



Information Attributes that Determine Information Overload in SNSs

(Research-in-Progress)

Dec 16, 2015

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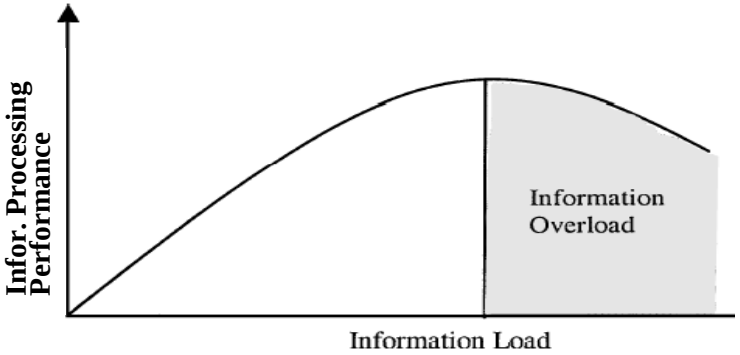
Research Background & Research Objective

Information Overload :

Information overload is a serious issues in SNS usage

- In an always connected environment, SNS users need to pay continuous attention to the huge volume of information
- **When SNS users are impeded by too much information and it exceeds a user's information processing capacity, information overload occurs**

Too much information load (beyond threshold)
→ increased cognitive loads
→ feel tired in SNSs → suspending SNS activities



➡ More considerations of information overload in SNSs should be needed

This study examines the factors influencing information overload in SNSs by focusing on information attributes, and it investigates how those factors interact with each other

Conceptual Background

Information Attributes influencing Overload

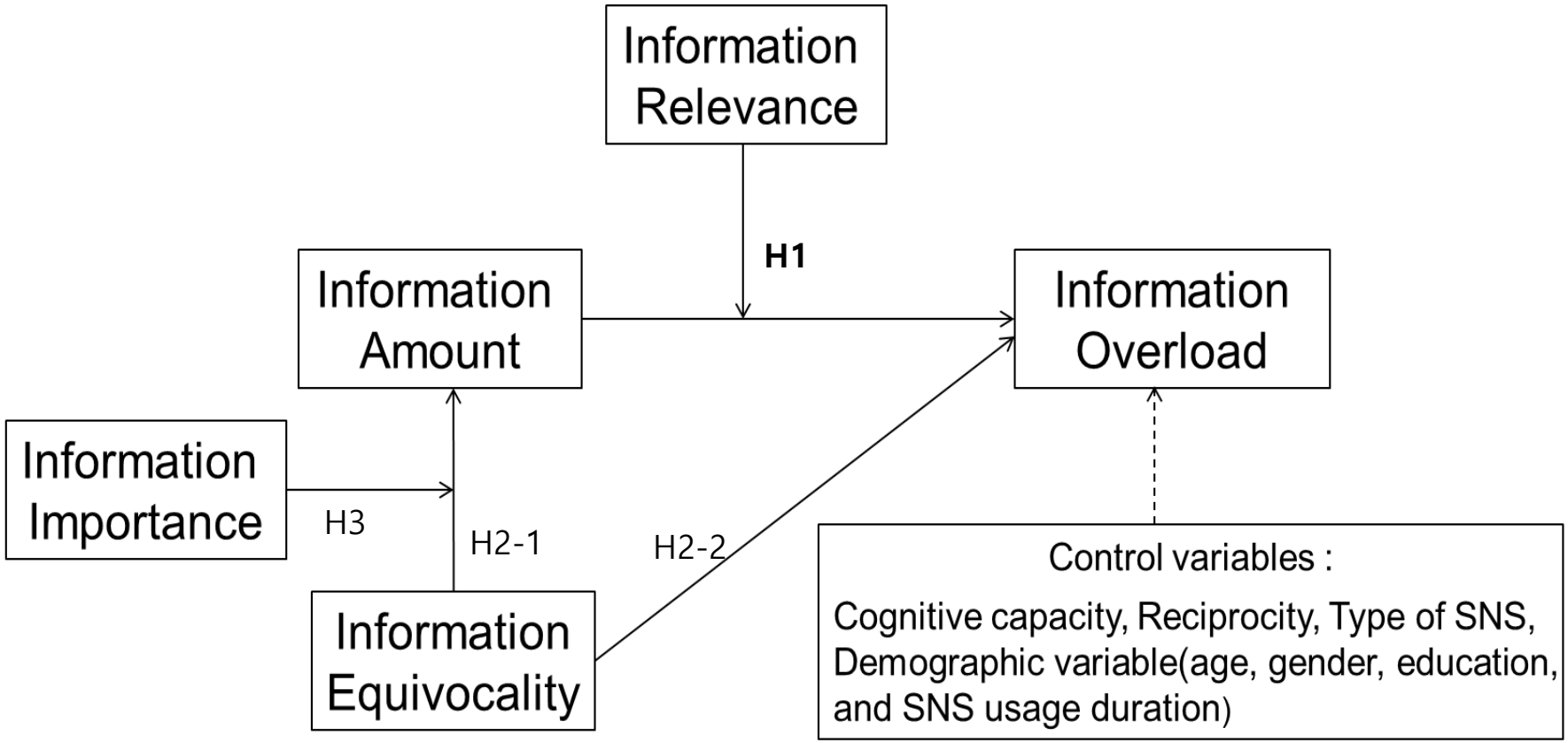
- **Information attributes are multi-dimensional** (Schneider 1987; Sprinkle & Tubbs 1998)
  - Both sides of "Quantitative aspect of information (i.e., infor. amount)" and "Qualitative attributes of information" should be considered (Owen 1992)
- Especially, relevance, equivocality, and importance of information have received much attention in the literatures related to information overload

➔ Thus, this study identifies 4 information attributes (i.e., Amount, Relevance, Equivocality, and Importance) as main determinants

➔ It attempts to clarify the order relations among the information attributes related to information overload

➔ The results of this study will provide some implication about how to reduce users' information overload in SNSs

Research Model & Hypotheses

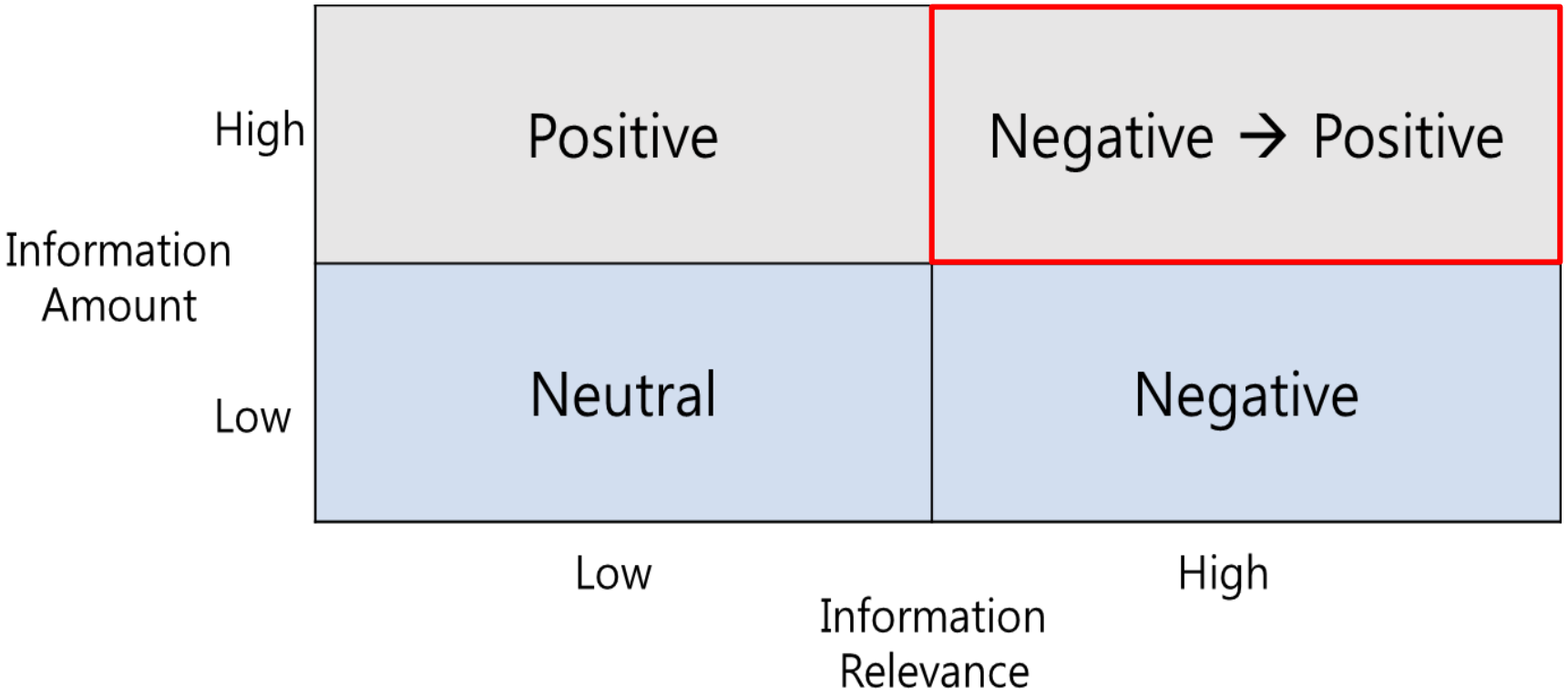


- Information Relevance : the extent to which information is helpful and applicable to a user
- Information Equivocality : The extent to which information has several meanings and can be interpreted in various ways
- Information Importance : The extent to which a user perceives the information to be highly necessary for performing a task and maintaining the relationship with others
- Information Overload : The extent to which users are exposed to more information than their information processing capacities in SNSs

Research Model of H1

H1: this study attempts to investigate whether there is an interaction effect between information amount and information relevance to influence information overload

* There might be a "threshold" point, which it means a "point of diminishing return"
  - Before a certain threshold point, an incremental unit of relevant information reduce overload
  - After that point, an incremental unit of relevant information may increase information overload, regardless of the level of relevance (the law of diminishing marginal returns)

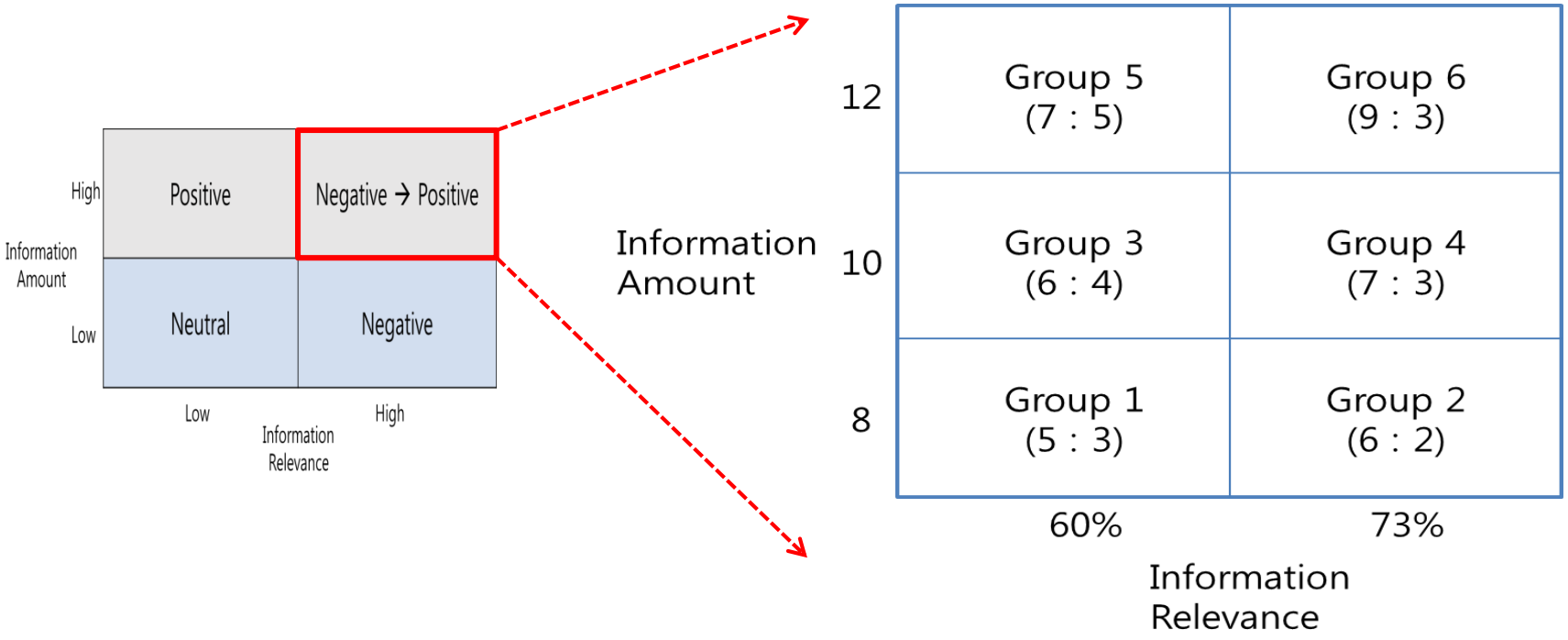


< Interaction Effects (bet. Amount & Relevance) on Information Overload >

Research Methodology

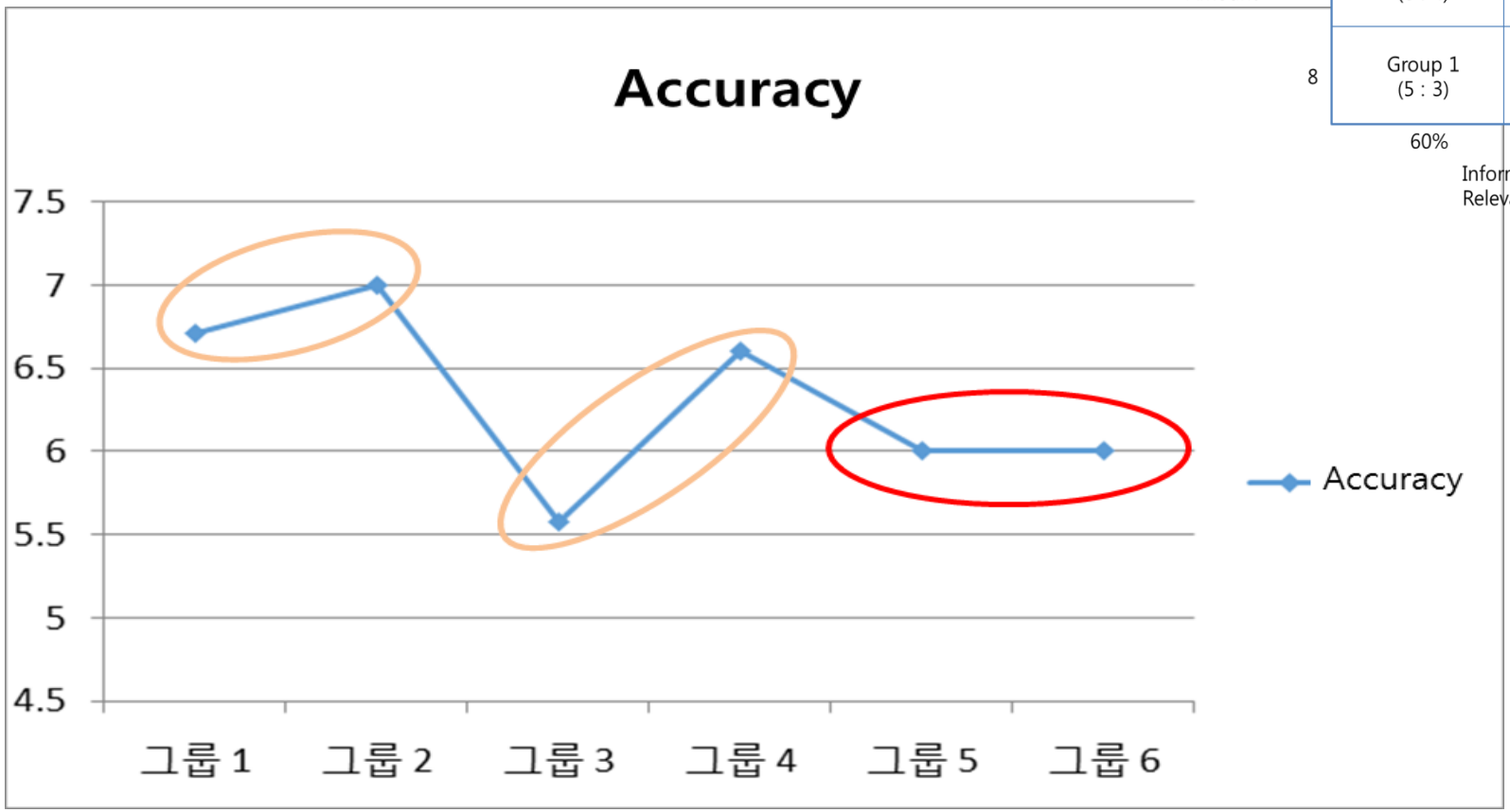
A Field Experiment :

- Very recently, we designed and conducted a pilot experiment to test model (H1)
- Especially, we focus on the testing of the case of High amount & High relevance in order to examine the threshold point
  - Infor. Amount : the number of information items
  - Infor. Relevance : the level of relativeness and usefulness in terms of user's interest area
  - Infor. Overload : Error rates (Accuracy, reversely) & Reaction Time in the selective attention task
  - In Cognitive load theory, human information processing capacity is limited to about 7 items of infor. at any one time. Thus, above 7 items → High level of infor. Amount
  - The % of relevant information is beyond 60% → High level of Infor. Relevance (Keller & Stelin, 1987)



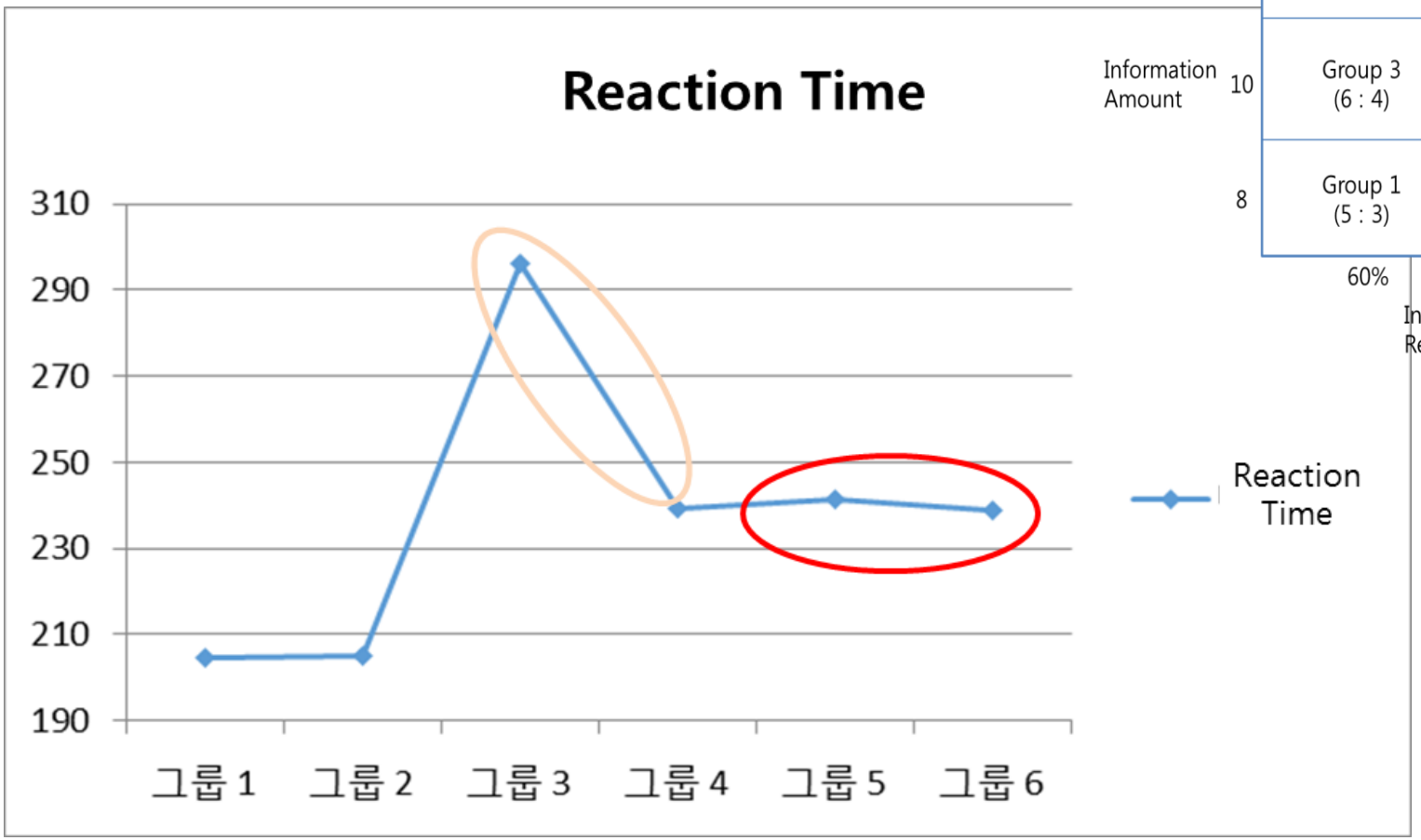
The Results of Pilot Experiment (H1)

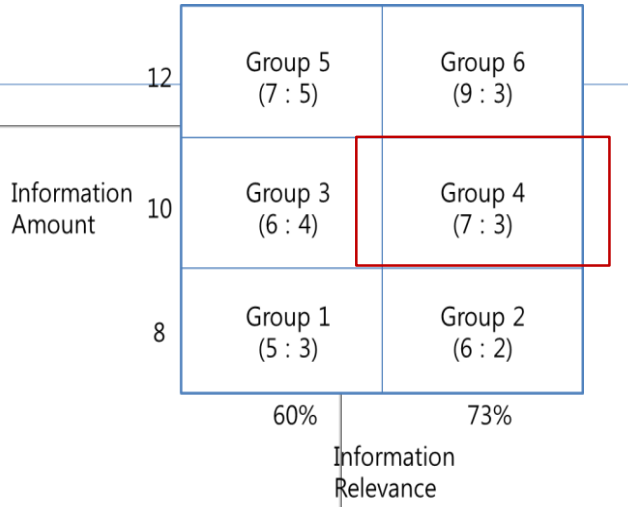
Information Amount	Information Relevance: 60%	Information Relevance: 73%
12	Group 5 (7 : 5)	Group 6 (9 : 3)
10	Group 3 (6 : 4)	Group 4 (7 : 3)
8	Group 1 (5 : 3)	Group 2 (6 : 2)



When information amount is high, information relevance reduces information overload before the threshold point (e.g., Group 4); but after the threshold point (Group 5 &6), more relevant information increases information overload (or cannot reduce information overload) regardless of the level of relevance

The Results of Pilot Experiment (H1)

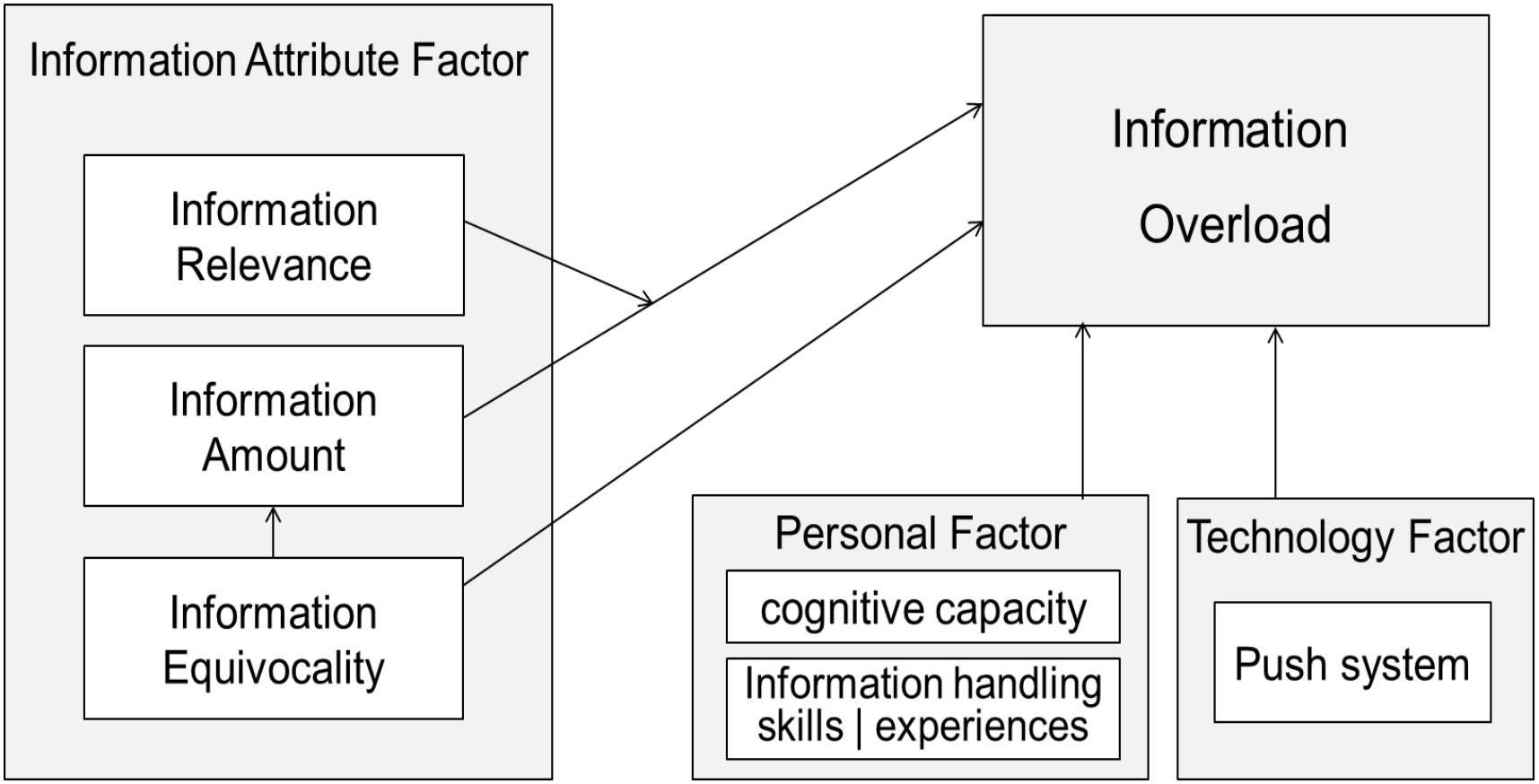




- When information amount is high, information relevance reduces information overload before the threshold point (e.g., Group 4); but after the threshold point (Group 5&6), more relevant information cannot reduce information overload regardless of the level of relevance

➔ There might be threshold point (e.g.: it could be located in (amount =10 & relevance = 73%)

Future Research – Revised Research Model



Epilog

- 본 컨퍼런스는 세계적으로 명망 높은 국제 컨퍼런스로서, 2015년 ICIS도 그 명성에 걸맞게 1천 여명이 넘는 다양한 ICT 연구자들이 세계 곳곳에서 참여하였음
- 본 컨퍼런스를 통해 ICT/IS와 관련된 다양한 주제와 방법론, 최신 연구 아이디어 등을 접할 수 있었기에, 앞으로의 연구에 매우 도움이 되는 유익한 시간이었음
- 또한 ICT 분야의 국제적인 연구자들과 교류할 수 있는 기회가 되었고, 관심 있는 연구 내용을 전문가들과 공유하고 토론함으로써 현재 구상 중인 연구를 더욱 발전시킬 수 있는 계기가 됨
- 본 컨퍼런스를 통해 시각의 폭을 더 넓힐 수 있었고, 현재 다양한 ICT 연구들이 추진되고 있음을 피부로 실감함으로써 신선한 자극이 되고 우수한 연구 추진의 동기부여가 됨