

タイトル

The Development of digital Post-it interface for i.school workshop for simultaneous discussion with multiple users
アイディアの集合知を形成する付箋型ワークショップ・インターフェースの開発

氏名・所属

中島愛, 中山浩太郎, 安野貴博, 堀井秀之 / 東京大学 知の構造化センター
Ai NAKAJIMA, Takahiro ANNO, Kotaro NAKAYAMA, Hideyuki HORII / Center for Knowledge Structuring, University of Tokyo

連絡先

中島愛	kamirazio@gmail.com
中山浩太郎	nakayama@cks.u-tokyo.ac.jp
安野貴博	annyotaka@gmail.com
堀井秀之	horii@civil.t.u-tokyo.ac.jp

背景と目的

- Visualize information with the measures of spatial configuration for the representing relevant data.
- Enable tracing user's behaviors including their step of the information processing during constructing a new idea.
- Support continuity between workshops and off-workshops.
- Utilize series of workshop records for non-participants or observers.
- Form collective wisdom for prospective ideas and solutions.

内容

We designed a novel workshop interface as an extension for the knowledge Structuring tool "APISNOTE". In the conventional workshop by using Post-it papers, it becomes difficult to access specific information due to the increase of the amount of information and information processing. APISNOTE enables us not only to access unconscious information quickly, but also to analyze and to review the records of workshop by visualizing relationships between modules. To investigate the changes and effects of user experience by digitalizing post-it, we conducted user testing in actual workshops of i.school in the university of Tokyo.

結論

The new version of APISNote not only works as effective input system in workshops but also does as observation instrument to review them. It created additional opportunities to be of help in prospective research such as finding new methods. In the feedback, the users suggested unexpected ideas by observation of past high-quality discussion records. In the feedback, the users suggested unexpected advantageous usage such as for efficient self-work (assignment) based on the records of previous workshop and for remote workshops among teammates working in each home, and so on. To develop the most ideal workshop tool, APISNote should be improved based on the observation of user behaviors and opinion.

参考文献

東京大学 i.school, トウキョウ ダイガク i school. 東大式世界を変えるイノベーションのつくりかた. 早川書房; 2010.

The Development of digital Post-it interface for i.school workshop for simultaneous discussion with multiple users

アイディアの集合知を形成する付箋型ワークショップ・インターフェースの開発

Ai NAKAJIMA, Takahiro ANNO, Kotaro NAKAYAMA, Hideyuki HORII / Center for Knowledge Structuring, University of Tokyo

ABSTRACT

We designed a novel workshop interface as an extension for the knowledge Structuring tool "APISNOTE." In the conventional workshop by using Post-it papers, it becomes difficult to access specific information due to the increase of the amount of information and information processing. APISNOTE enables us not only to access unconscious information quickly, but also to analyze and to review the records of workshop by visualizing relationships between modules.

To investigate the changes and effects of user experience by digitalizing post-it, we conducted user testing in actual workshops of i.school in the university of Tokyo.

知の構造化ツール APISNote に、付箋をモチーフとしたワークショップ・インターフェースを拡張した。付箋紙を使った従来のワークショップでは、情報量が増え、情報処理が進んで行くに従い、個々の情報にアクセスすることが困難であった。APISNote では埋もれた情報へ素早くアクセスできるだけでなく、情報の関係性や情報処理プロセスの可視化など、ワークショップで蓄積された記録を分析し評価する機能を実現している。付箋がデジタル化することで、ユーザーの体験にどのような変化や効果をもたらすか、東京大学 i.school ワークショップでユーザテストを行った。

OBJECTIVE

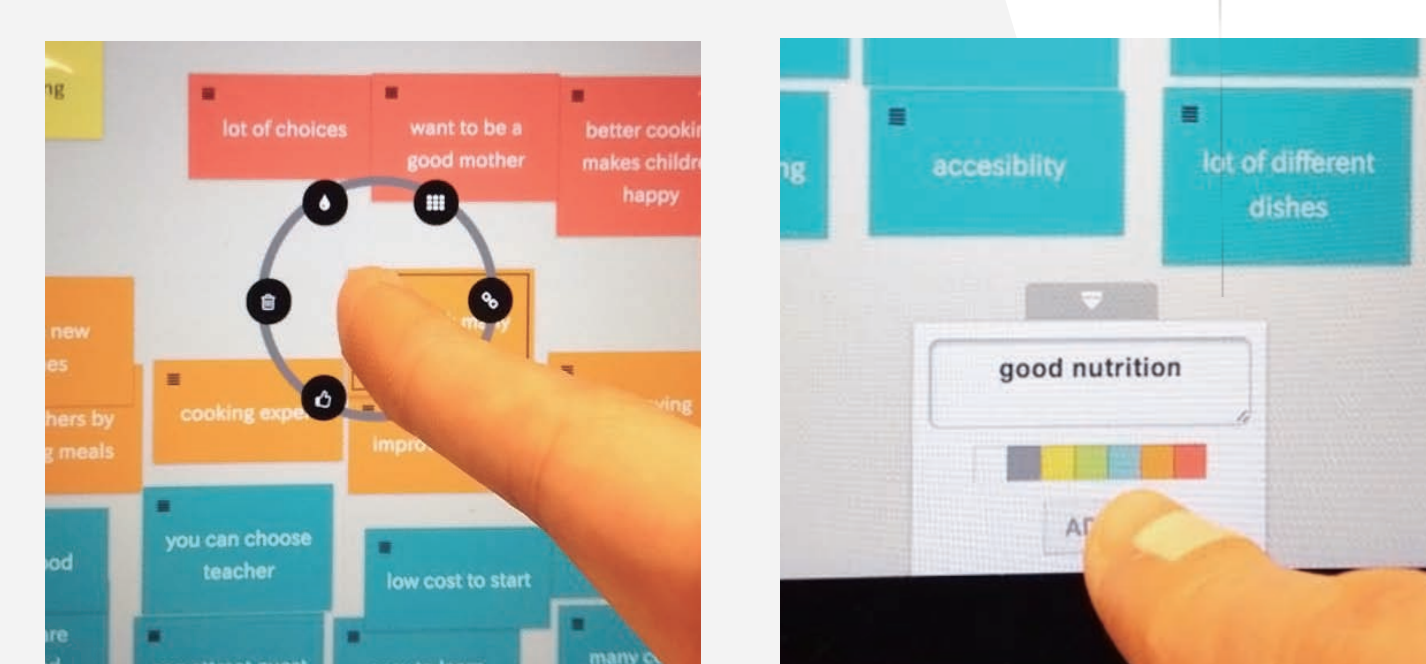
- Visualize information with the measures of spatial configuration for the representing relevant data.
- Enable tracing users' behaviors including their step of information processing during constructing a new idea.
- Support continuity between workshops and off-workshops.
- Utilize series of workshop records for non-participants or observers.
- Form collective wisdom for prospective ideas and solutions.

DESIGN of USER INTERFACE

Manage Ideas

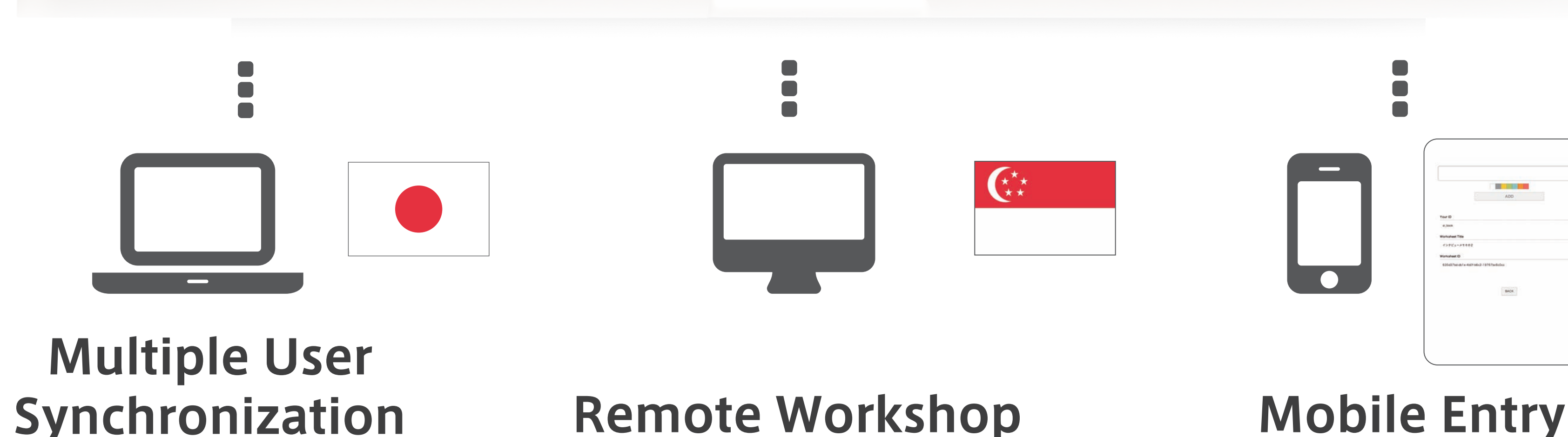
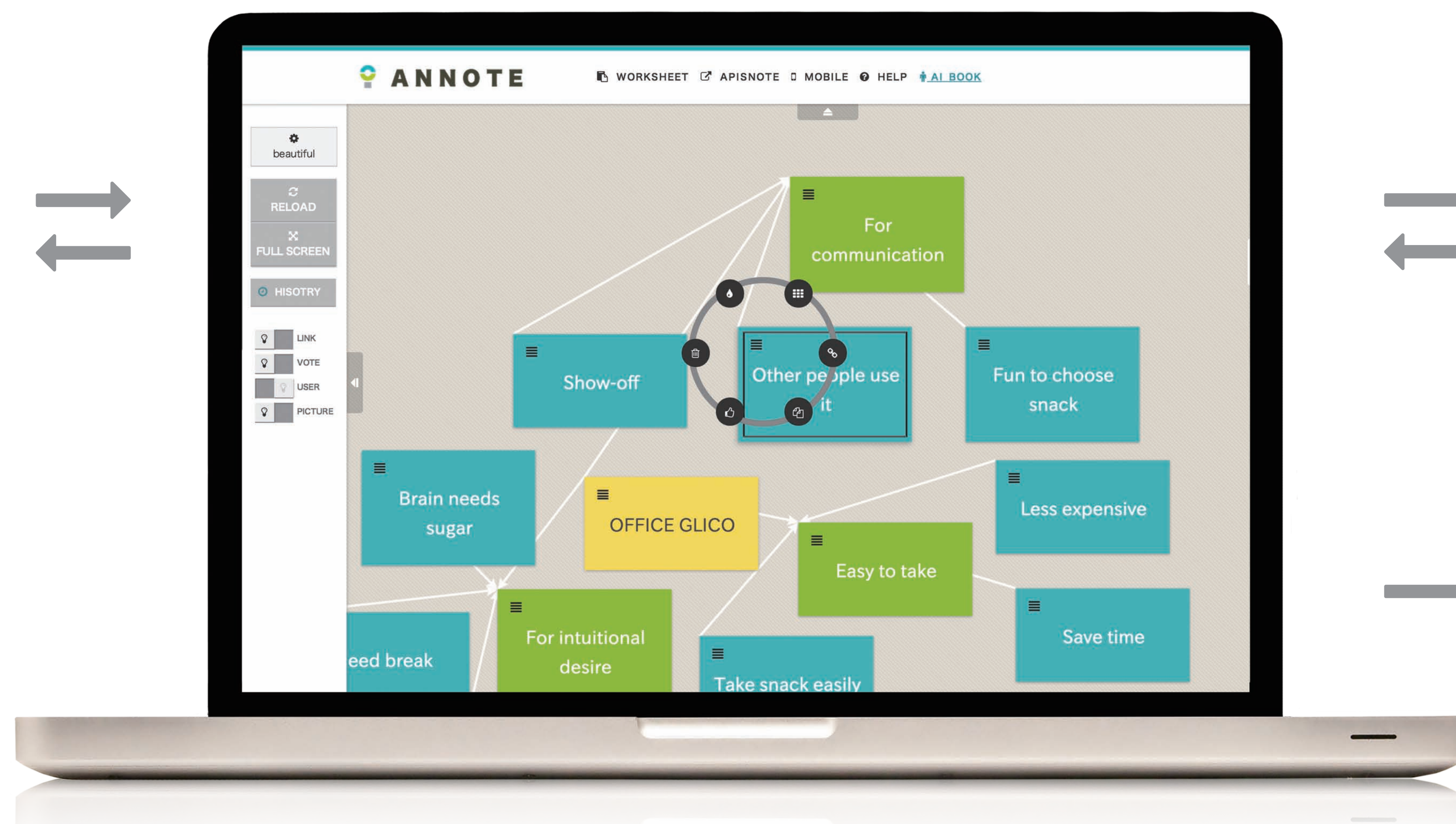


Synchronous Requests with Evernote

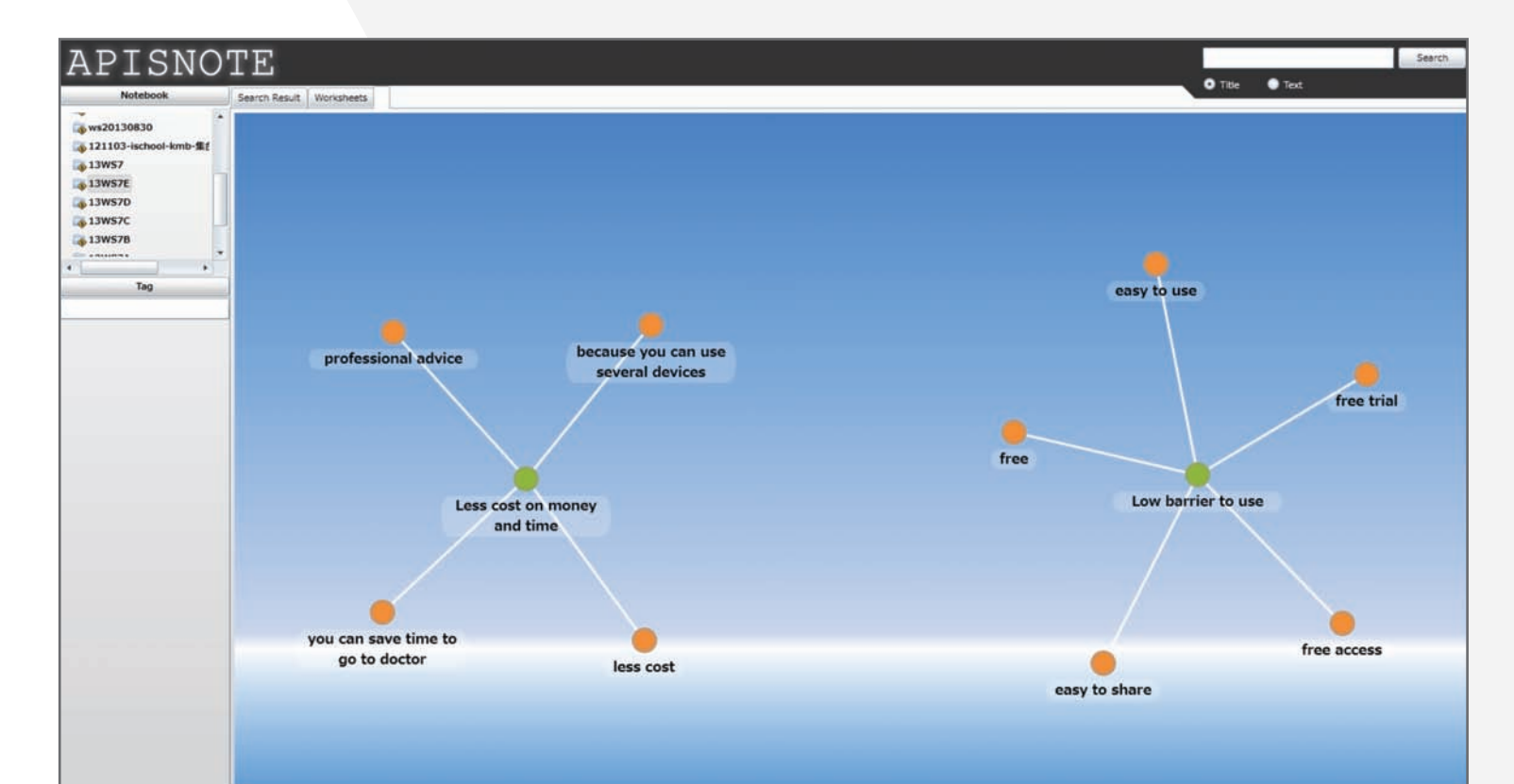


Intuitive operation for the touch displays

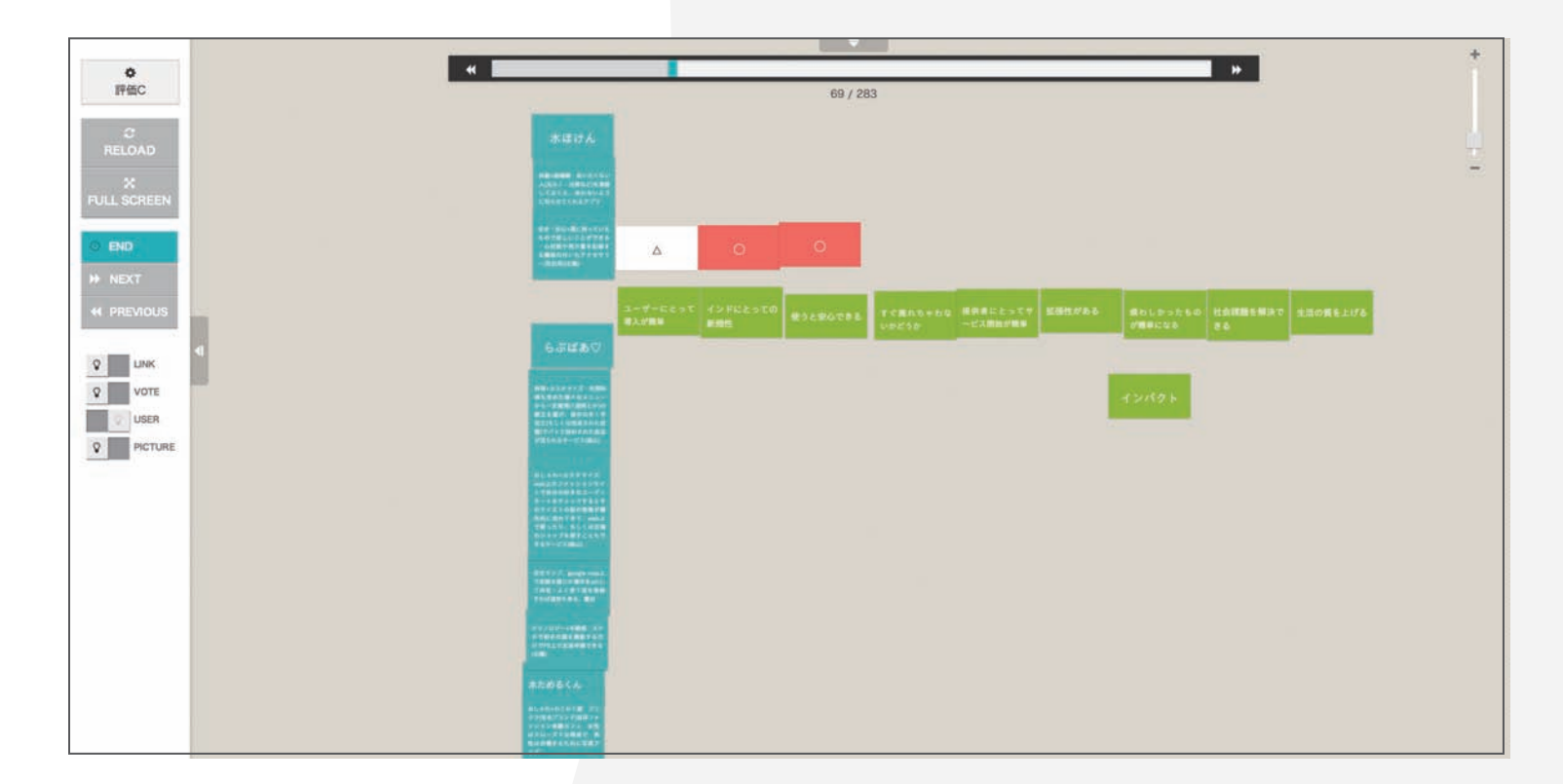
Create Ideas



Review Workshop



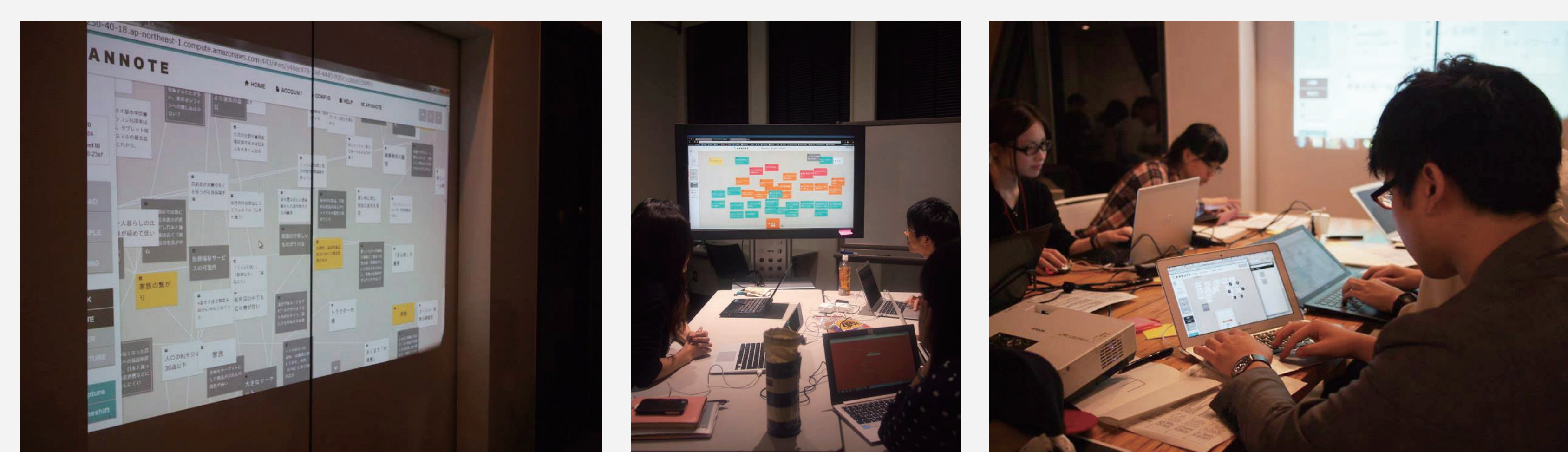
Analyze relationship of ideas



History Function
Trace processes of workshop

USER TEST at i.school

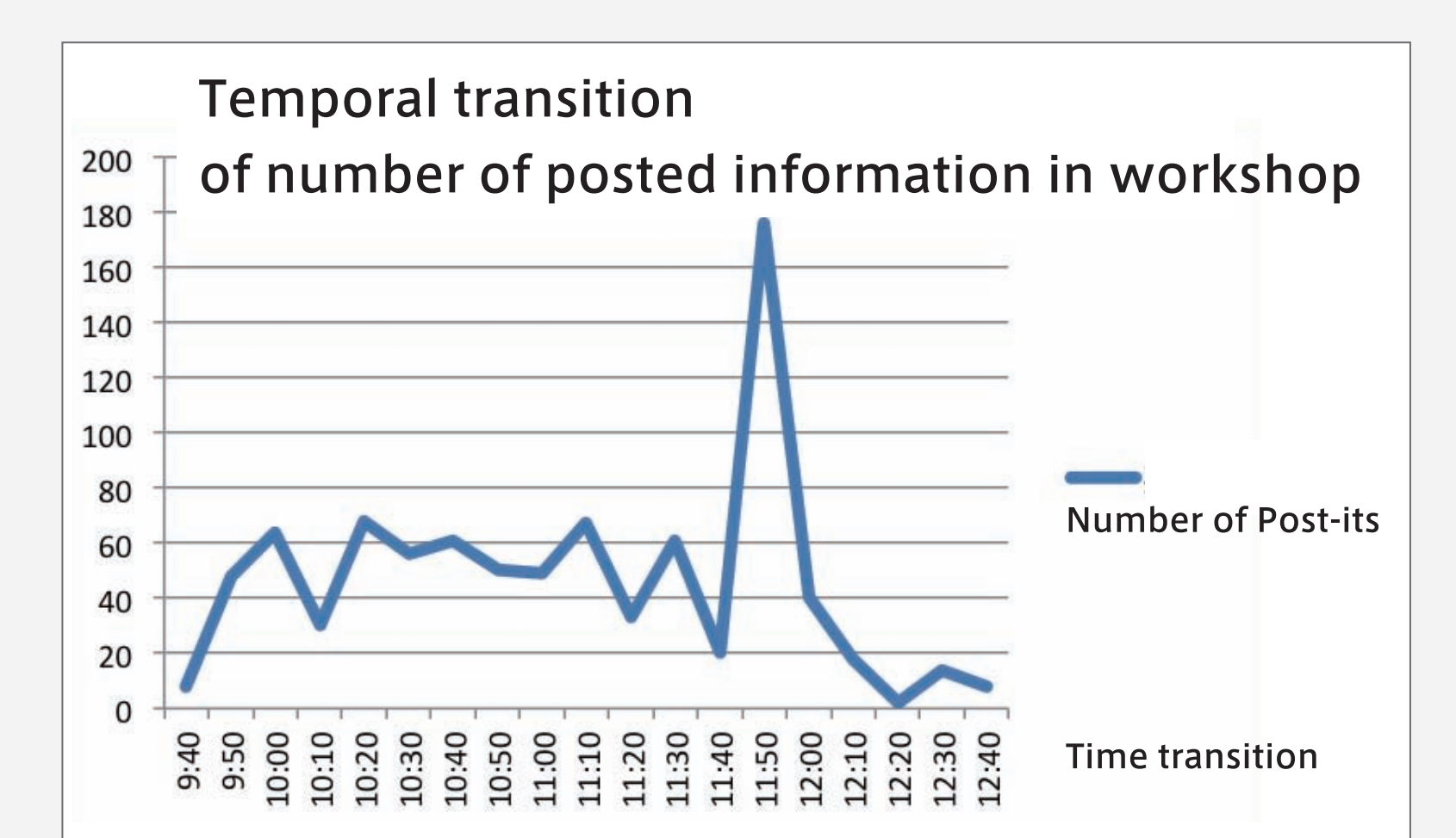
We introduced the new version of APISNote to the i.school, which is the training program of innovative personnel in the university of Tokyo. We interviewed with participants of workshop about the operability and comparison of experience in the paper-based workshop with one in the workshop using digitalized post-its, APISNote [fig1.] With the first prototype, we found that students think that digital post-it system didn't help for their quality of discussion. Moreover it decreased the communication in workshop. In response to the first results, we improve the application with introducing alternative interface [fig.2.] In second user testing, we realized that interface design is highly correlated with the dedication for group work and intuitive operation is mandatory to bring smoothly functioning discussion. End of the workshop, it facilitate the analysis of activities of workshop [fig.3.]



[fig.1]

	before	after
Amount of conversation	2.2	4.6
Quality of discussion	2.7	4.6
Amount of ideas	3.0	3.9
Quality of ideas	3.0	4.1
Design	3.7	
User-friendliness	3.5	
Fascination of interaction	3.8	

[fig.2]



[fig.3]

CONCLUSION

The new version of APISNote not only works as effective input system in workshops but also does as observation instrument to review them. It created additional opportunities to be of help in prospective research such as finding new method of ideas by observation of past high-quality discussion records. In the feedback, the users suggested unexpected advantageous usage such as for efficient self-work (assignment) based on the records of previous workshop and for remote workshops among teammates working in each home, and so on. To develop the most ideal workshop tool, APISNote should be improved based on the observation of user behaviors and opinion.