**Setting of Document Importance Based on Analysis of User’s Usual Working**

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**Background & Purpose**
- Feature of tabletop display (e.g. free movement of data) are appropriate for **browsing multiple documents**.
- However, in such a situation, important documents may be buried, just as they do in the real world.
- We aim to develop a system that can automatically suggest **important documents**.

**Definition of Importance**
- What parameters does contribute to the documents importance?
  - We focus on **Writing** and **Position** of the document.

**Setting Importance by Writing**
- The amount of notes contribute to the importance.
- The documents which have larger amount of notes are more important.

**Setting Importance by Position**
- The location of notes contribute to the importance.
- The documents closer to user are more important.
- The document top of stacking is most important.

**Future work**
- Considering to use the other parameters, and combination of parameters.
- Evaluating the usefulness of our system through the experiments.
- Implementing a learning function.

**Analysis**
- We asked (1) why, (2) where, and (3) what they wrote to their document, and the importance of each document into three grades.
- There are relationship between amount of writing and the importance.
- Usage of the marks and the colors are different with each subject.

**Setting Importance by Writing**
- Using some marks.
- Enclose deadline in a circle.
- Important "Near but Top".
- Not important "Far and Bottom".

**Setting Importance by Position**
- Using approx. 10 documents that they had used recently, and to imagine making new document using these documents as references.
- We measured (1) the position, (2) stacking order, and (3) count of touches. After the task, we asked rate the importance of each stack.
- Important "Near".
- Not important "Near but Bottom".

**Implementation**
- User can select the mark and color, and sort the documents.
- Enclose deadline in a circle.
- Using multiple colors based on the writing date and speaker.
- The large amount of writing.

**Future work**
- Considering to use the other parameters, and combination of parameters.
- Evaluating the usefulness of our system through the experiments.
- Implementing a learning function.

We aim to the system that can adapt each user's preference based on their natural behavior.

**Equations**
- $I_n = \frac{k}{D_n} + l \times (1 - O_n)$
- $O_n = \frac{(w - d_n) \times (h - d_n)}{w \times h}$

**Notes**
- $w$, $h$: width and height of the document.
- $d_n$: distance between the user and center of the documents group.
- $O_n$: is the parameter of size of overlapped area.
- $D_n$: is the parameter of the distance between the user and center of the documents group.