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## Design and initial evaluation of visual-based intuitive aids for dietary food size description on mobile devices

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One critical issue in effective intake record is the prescriptive report of the amount of food. This process is frequently subjected to errors which can negate the effect of dietary control. Food size description can be conducted timely with the use of app where the food or the unfinished food presented in front of the user, mental activities in user's recall on the amount of food eaten are thus avoided. To come up with an intuitive dietary food size description on mobile devices, the user-centered innovative design of SBI (sketching-based interface) is proposed. SBI does not require the use of predetermined photos or the process of photos taking. The user simply describes the regular food shape e.g., round, and square by shading comparator (e.g., credit card) through clicking, dragging, or scribbling to scale. Three design alternatives based on different user-interactions are designed. The initial usability evaluation upon the accuracy of size description and time consumed for each design alternative are presented. Discussions include the further enhancement of SBI and whether or not SBI strengthens the user's awareness and conceptualization of food items through long-term use.

### Biography

Ying-Chieh Liu, PhD, is an Assistant Professor in the Department of Industrial Design at Chang Gung University. He received his PhD in Engineering Department, Cambridge University, UK. He is familiar with nutrition informatics and new product design.

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