

Find suitable phone size for your hand!

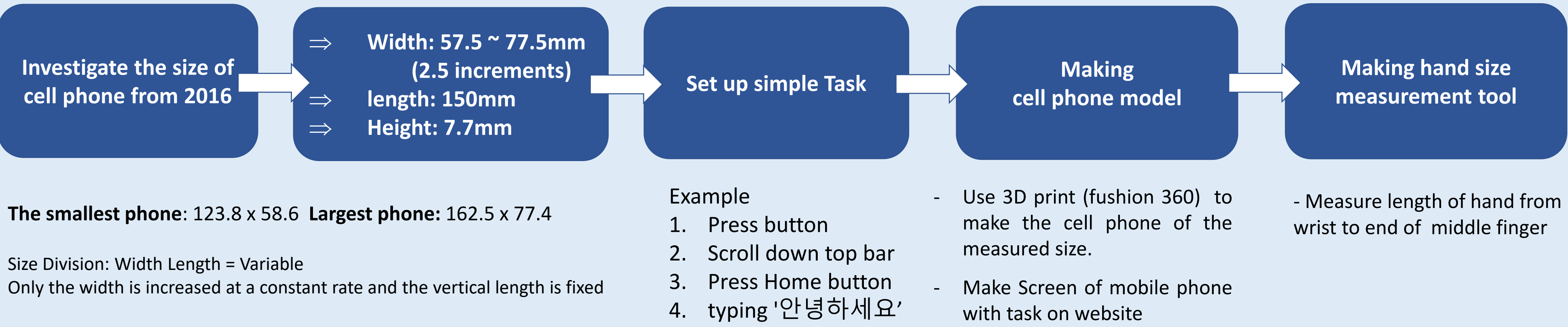
최강 핸드폰조 21400359 백윤정 /21400414 심재혁/ 21600078 김사라 / 21600763 한주희/ 21700689 조예림

Background and purpose

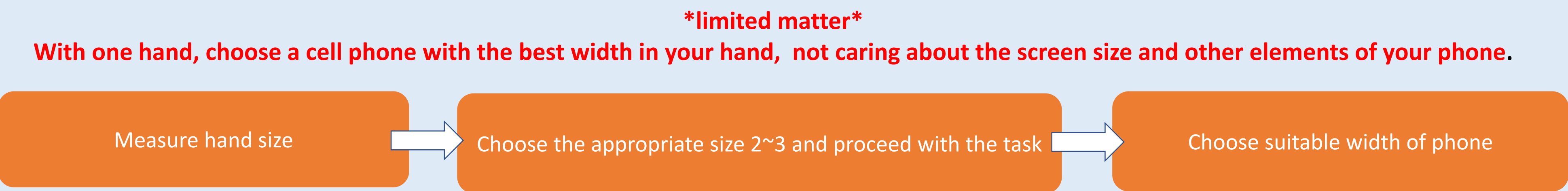
Recently, the use of mobile phones has increased due to the increase in the consumption of multimedia contents such as games and video viewing, and also the preferred screen size of consumers is increasing. Each manufacturer is launching a large-sized mobile phone, a so-called 'Pavelt', which has a large screen according to consumers' preferences. Our purpose of this project is to find suitable phone size according to hand size through evaluating usability of phones which has different size.

Survey method

1. Procedure for preparing the experiment



2. Experimental process



Result

- The total number of participants : 304 (Male : 136 / Female : 168)

1. Preferred size(width) of mobile phone

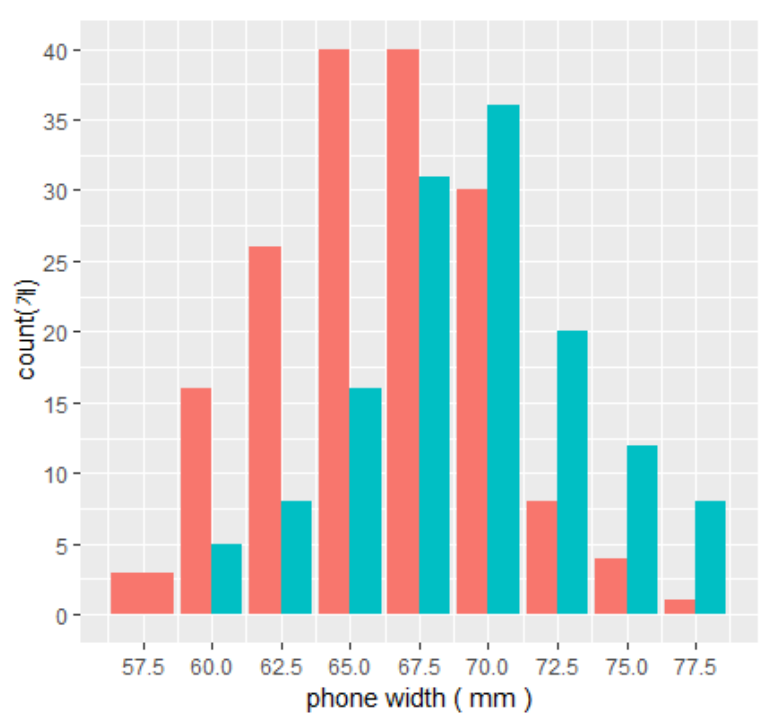


Image-1 Preferred size graph

Preferred width	$\mu \pm \sigma$
Total	67.6 ± 4.3
Male	69.3 ± 4.2
Female	66.2 ± 3.9

- On average, men prefer larger phone size than women.
- t-test(p-value) : $p < 0.001$
- ⇒ The difference between men's and women's preferred sizes of mobile phones is meaningful.

2. Hand size

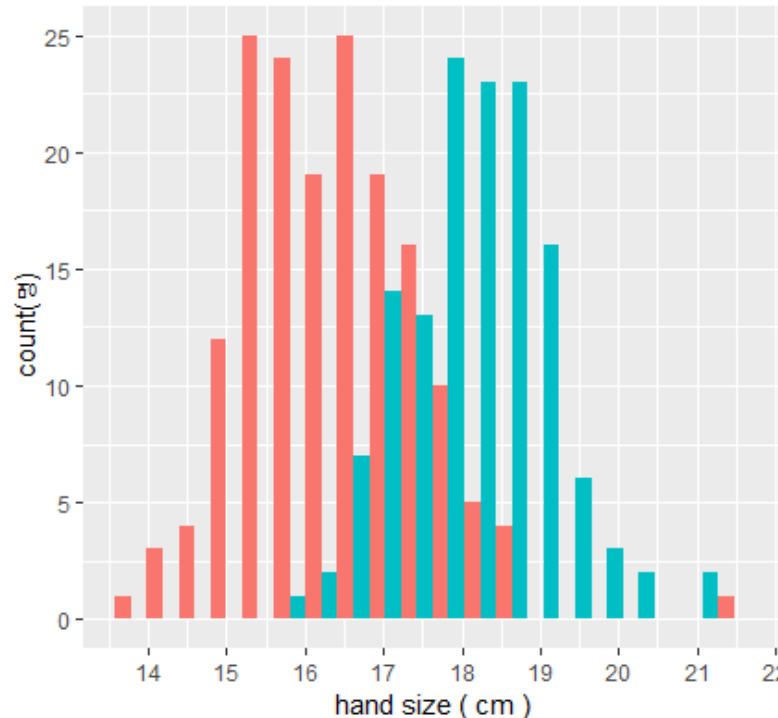


Image-2 Hand size graph

Hand size	$\mu \pm \sigma$
Total	17.2 ± 1.4
Male	18.2 ± 0.9
Female	16.4 ± 1.1

- The minimum value : 13.8cm
- The maximum value : 21.5cm
- On average, the size of a man's hand is larger than that of a woman's hand.

3. Correlation between preferred size

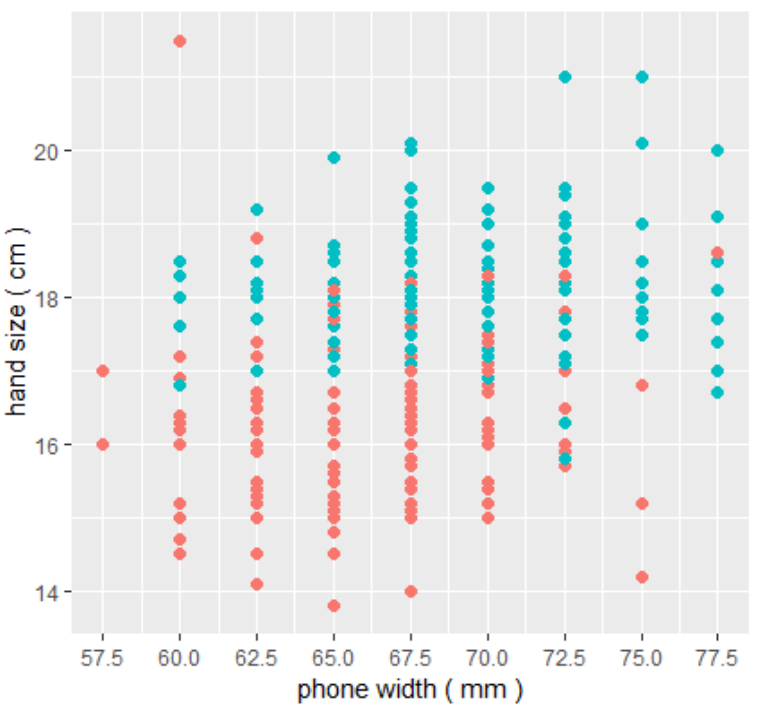


Image-3 Correlation graph (total)

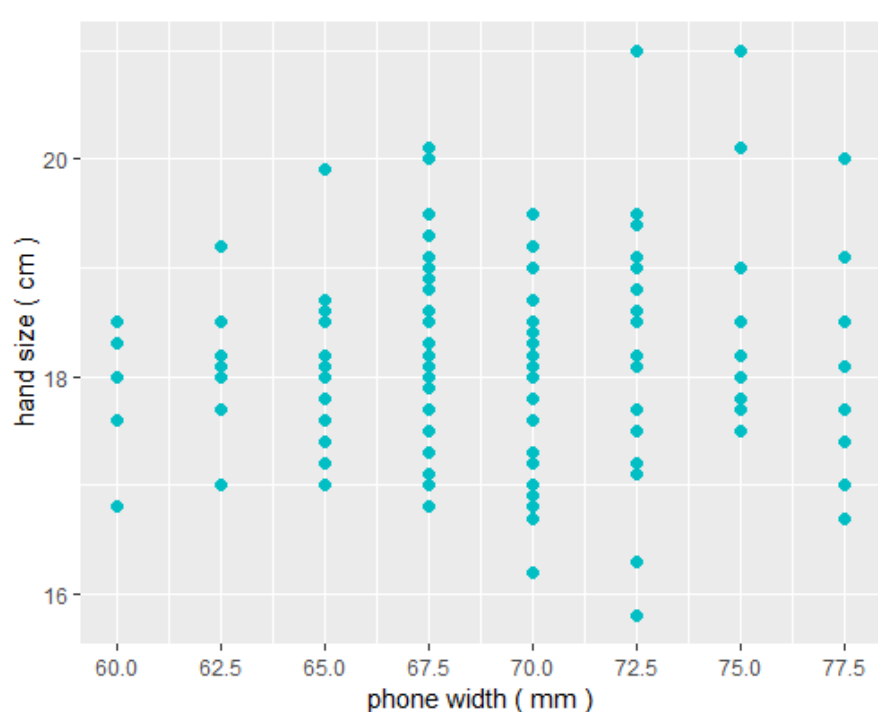


Image-4 Correlation graph (Male)

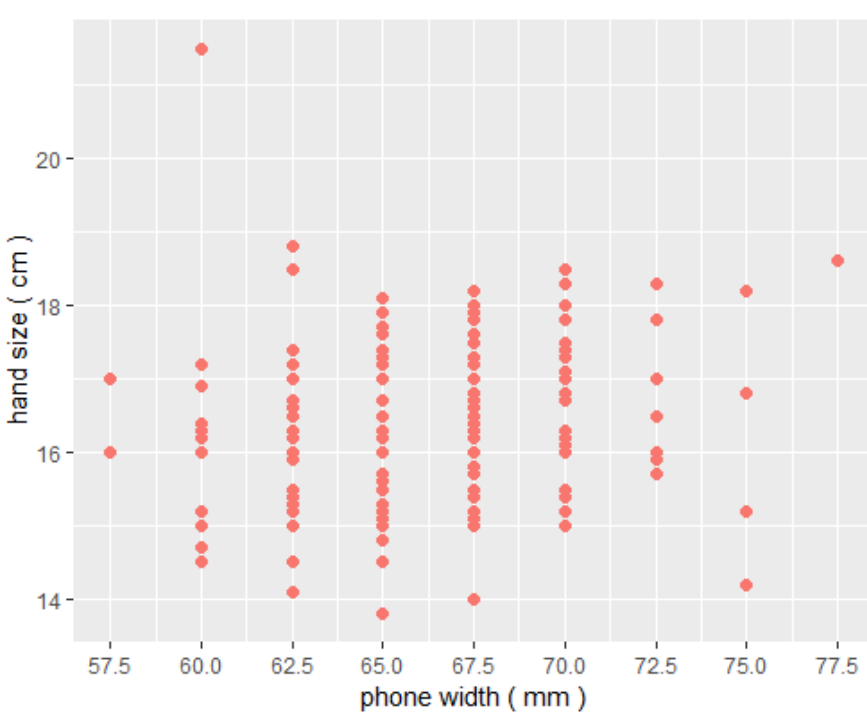


Image-5 Correlation graph (Female)

Correlation coefficient	
Total	0.34
Male	0.12
Female	0.18

- Overall, there is a weak correlation between preferred size and hand size.
- There is almost no correlation between preferred size and hand size when separating men's and women's data.

Discussion & Conclusion

1. The preferred width of cell phone is little correlated with the hand size.
2. The size of an individual's preferred mobile phone is different. However, when compared to men and women, the average size of the man's hand is larger than that of the woman, and the preferred width size of the man is also larger than that of the woman. Overall, when the hand size increases, there is a tendency to select a large-width mobile phone.
3. Regardless of hand size, there is personal preference. There is man's preferred size and woman's preferred size.

Design Application

1. The average width of the mobile phone selected by the woman is 66.2mm, and the average width of the mobile phone selected by the man is 69.3mm. It would be better to make a cell phone that goes between this size range.
2. In addition to hand size, there are several factors that affect the preference of mobile phone size. So, we have to consider other factors as well to make new product.