

# Supplementary Material:

## Automatic, Gestural, Voice, Positional, or Cross-Device Interaction? Comparing Interaction Methods to Indicate Topics of Interest to Public Displays

**Table S1.** Statistical comparison of interaction methods on each quality dimension (single-user study); \*adjusted p-value.

| Dimension            | Interaction Methods [Median] |        |        |       |        | Results       |          |          |
|----------------------|------------------------------|--------|--------|-------|--------|---------------|----------|----------|
|                      | Auto.                        | Cross. | Voice. | Gest. | Posit. | Outcome       | Z-Value  | P-value* |
| Accuracy             | 5                            | 5      | 2      | 4     | 4      | Auto > Voice  | -3.767   | 0.002    |
|                      |                              |        |        |       |        | Cross > Voice | -3.775   | 0.002    |
|                      |                              |        |        |       |        | Gest > Voice  | -3.334   | 0.009    |
|                      |                              |        |        |       |        | Posit > Voice | -3.671   | 0.002    |
| Ease of Use          | 5                            | 5      | 2      | 4     | 4      | Auto > Voice  | -3.572   | 0.004    |
|                      |                              |        |        |       |        | Cross > Voice | -3.550   | 0.004    |
|                      |                              |        |        |       |        | Gest > Voice  | -3.202   | 0.014    |
|                      |                              |        |        |       |        | Posit > Voice | -3.548   | 0.004    |
| Speed                | 5                            | 5      | 1      | 4     | 4      | Auto > Voice  | -3.719   | 0.002    |
|                      |                              |        |        |       |        | Cross > Voice | -3.593   | 0.003    |
|                      |                              |        |        |       |        | Gest > Voice  | -3.554   | 0.004    |
|                      |                              |        |        |       |        | Posit > Voice | -3.485   | 0.005    |
| Learnability         | 5                            | 5      | 4      | 4     | 4      |               |          |          |
| Fun                  | 3                            | 3      | 2      | 4     | 4      | Gest > Voice  | -3.21332 | 0.013    |
|                      |                              |        |        |       |        | Posit > Voice | -3.079   | 0.021    |
| Multi-Selection      | 5                            | 5      | 4      | 4     | 3.5    | Auto > Gest   | -3.269   | 0.011    |
|                      |                              |        |        |       |        | Auto > Voice  | -3.114   | 0.018    |
|                      |                              |        |        |       |        | Cross > Gest  | -2.961   | 0.031    |
|                      |                              |        |        |       |        | Cross > Voice | -3.119   | 0.018    |
| Modification         | 5                            | 5      | 2      | 4     | 4      | Auto > Voice  | -3.223   | 0.013    |
|                      |                              |        |        |       |        | Cross > Gest  | -2.987   | 0.028    |
|                      |                              |        |        |       |        | Cross > Voice | -3.759   | 0.002    |
|                      |                              |        |        |       |        | Cross > Posit | -3.247   | 0.012    |
|                      |                              |        |        |       |        | Posit > Voice | -3.351   | 0.008    |
| Awkwardness          | 5                            | 5      | 2      | 3     | 3      | Auto > Gest   | -3.446   | 0.006    |
|                      |                              |        |        |       |        | Auto > Voice  | -3.472   | 0.005    |
|                      |                              |        |        |       |        | Auto > Posit  | -3.341   | 0.008    |
|                      |                              |        |        |       |        | Cross > Gest  | -3.503   | 0.005    |
|                      |                              |        |        |       |        | Cross > Voice | -3.500   | 0.005    |
|                      |                              |        |        |       |        | Cross > Posit | -3.339   | 0.008    |
| Screen-switch effort | 5                            | 4      | 3      | 4     | 4      | Auto > Cross  | -2.869   | 0.041    |
|                      |                              |        |        |       |        | Auto > Voice  | -3.542   | 0.004    |
|                      |                              |        |        |       |        | Posit > Voice | -3.482   | 0.005    |
|                      |                              |        |        |       |        | Gest > Voice  | -3.482   | 0.005    |
| Overall Rating       | 4                            | 4.5    | 1      | 4     | 3.5    | Auto > Voice  | -3.652   | 0.003    |
|                      |                              |        |        |       |        | Auto > Gest   | -3.184   | 0.015    |
|                      |                              |        |        |       |        | Cross > Voice | -3.663   | 0.002    |
|                      |                              |        |        |       |        | Cross > Gest  | -3.234   | 0.012    |
|                      |                              |        |        |       |        | Cross > Posit | -3.106   | 0.019    |
|                      |                              |        |        |       |        | Gest > Voice  | -3.531   | 0.004    |
|                      |                              |        |        |       |        | Posit > Voice | -3.277   | 0.010    |