

poor task-agnostic mapping and compare it to a task-analysis-based mapping and “discover” that a task-analysis-based mapping results in better listener performance (conveniently confirming our hypothesis that task-analysis-based designs will result in better performance). To ensure that this sort of bias does not creep in, we will base the task-agnostic designs on designs found in the literature that have been used by other researchers. The task-agnostic designs will also be designs that pertain to human movement, since this research focuses on sEMG data sonification. We will then compare these task-agnostic mappings with task-analysis-based mappings to see how each mapping affects listener performance.

To perform these comparisons, we will identify characteristics of the sEMG data for our listeners to identify after listening to each sonification and then record the accuracy of their answers. We will then compare the accuracy of the listeners’ responses between sonification designs in order to determine the effects of design on performance and determine whether or not task-analysis-based designs could improve listener performance.

5. LINKS TO SOUND FILES

Pitch/Loudness mapping with spatialization (PL):
<https://soundcloud.com/user-341542684/pitchloudness-mapping-with-spatialization>

Pitch/Loudness/Attack Time mapping with spatialization (PLA):
<https://soundcloud.com/user-341542684/pitchloudnessattack-time-mapping-with-spatialization>

6. REFERENCES

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