A Multi-Touch DJ Interface with Remote Audience Feedback

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Abstract

Our system is a multi-touch audio mixing with remote audience feedback, called PlanMixPlay. It features:

• Time-Line integrated 'Likes' and comments

• Time-Line integrated audience histogram

• Intuitive direct touch interaction

Two studies were conducted to test PlanMixPlay:

• Qualitative exploratory in-lab formative study

• Qualitative/Quantitative live broadcast study

[PlanMixPlay] gives you inspiration and energy. [...] It works. I was surprised.

User-Study DJ Participant 1

Introduction

Internet broadcasting (e.g. via Twitch.Tv, Ustream and YouTube) present DJs with an attractive and natural way to reach bigger audiences. However:

• Spatially separating the DJs from the audience impedes the DJ's traditional method of gaining awareness

• Existing broadcasting interfaces provide feedback (via chat windows) in a separate interface, dividing the DJs attention

• Existing broadcasting interfaces present the feedback out of context in regards to the performance

The feedback [from PlanMixPlay] was helpful. Particularly if I was doing an online set, that would be really useful. [The feedback] is more direct. If we use a dance floor analogy; People will leave the dance floor [due to fatigue or to get a drink,] not cause they don't like the music [...]. [...] So in that way, dancing is kind of an imprecise metric.

User-Study DJ Participant 2

Integrated Feedback

PlanMixPlay presents feedback in-context with the performance:

• DJs can easily tell what the audience is responding to

• Feedback can be individually toggled on and off at any time

Live Broadcast Study

Four live broadcasts were performed:

• Each show featured a different DJ and lasted 2 hours

• DJs received bronze and gold feedback from unknown and known listeners respectively

• Data shows a minor engaged portion of the audience

Day of Show	Min. Listeners	Max. Listeners	Avrg. Listeners	Likes (Bronze/Gold)	Comments (Bronze/Gold)
Sunday	96	111	104	38 / 4	96 / 28
Tuesday	121	152	134	13 / 4	84 / 8
Thursday	131	157	145	29 / 1	85 / 21
Sunday	94	122	104	14 / 15	58 / 52

[PlanMixPlay] would help me understand my audience better, know what they want to hear, which could lead to better parties or sets. That's important. [...] I can see a lot of uses for that.
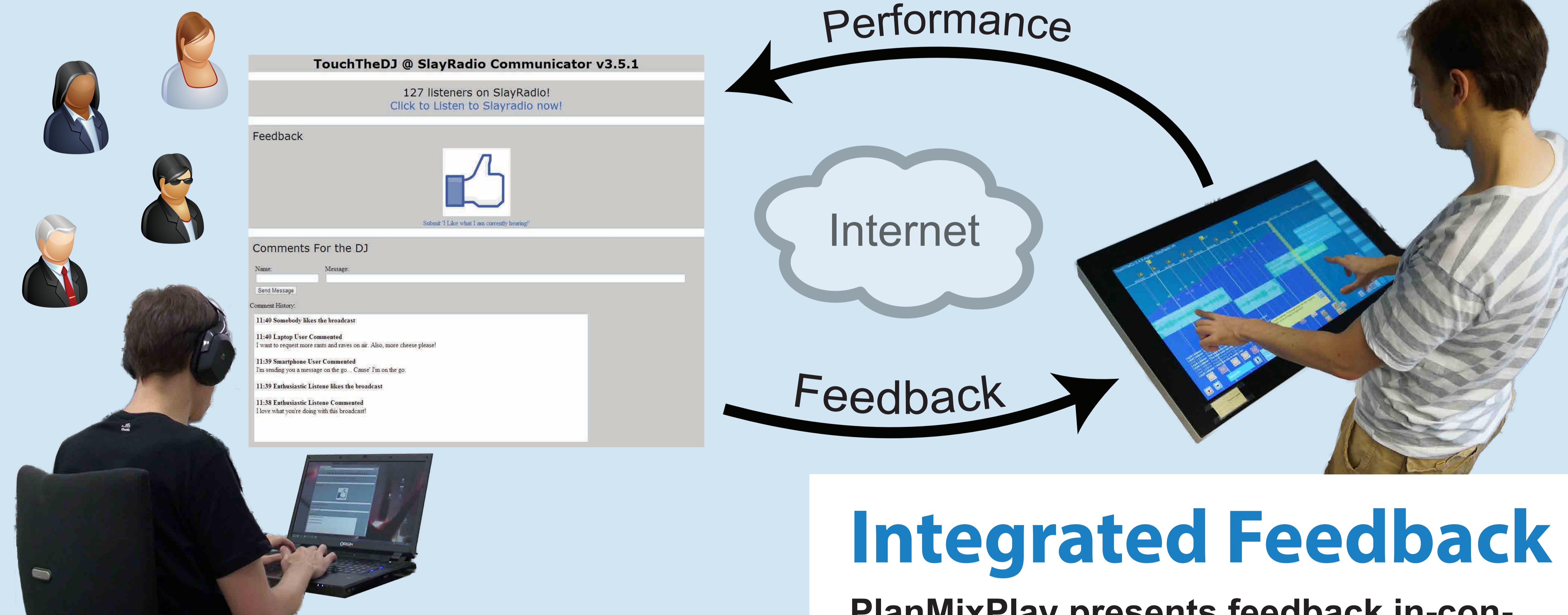
User-Study DJ Participant 3

Conclusion

• All DJs expressed interest in receiving integrated feedback during remote performances

• Some DJs expressed interest in receiving integrated feedback during local performances

• We believe local integrated feedback to be most useful in situations with limited direct audience interaction, e.g. large concerts or festivals

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