Holland Bloorview
Kids Rehabilitation Hospital

A Software Application that Enables a Naturalistic Context to Investigate Social Cognition Mechanisms in Children

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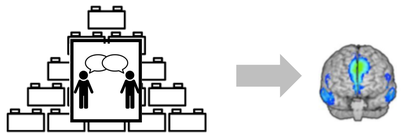
prism lab

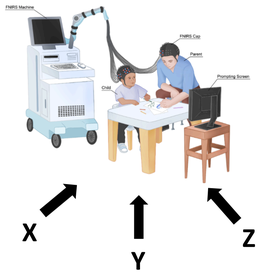
Background



Previous social cognition studies use structured environments [1]…

…but social interactions occur in natural settings [2].

Need to design a natural study environment



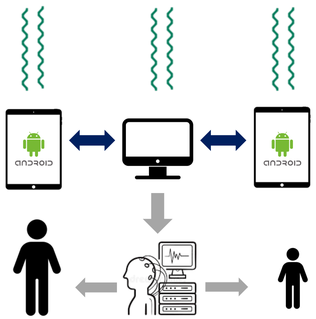
Objective

Design an App

To provide experimental control in a natural interaction

To measure mechanisms of social brain function in children

Design



Threading
(for parallel processing)

TCP/IP network sockets
(for communication between devices over the internet)

kivy

python™

References

[1] R. Hari, L. Henriksson, S. Malinen, and L. Parkkonen, "Centrality of Social Interaction in Human Brain Function," *Neuron*, Oct. 2015.
[2] L. Schilbach, B. Timmermans, V. Reddy, A. Costall, G. Bente, T.Schlicht, and K. Vogeley, "Toward a second-person neuroscience," *Behavioral and Brain Sciences*, pp. 393-462, 2013.

A software application that enables a child's social brain function to be studied in a natural setting

Results and Conclusion

Check out QR code for App demo!

Provides experimental control during a social interaction that emerges naturally.

- Creates a naturalistic context
- Confounds are reduced
- Can measure social cognition

Add motor parameter measurements

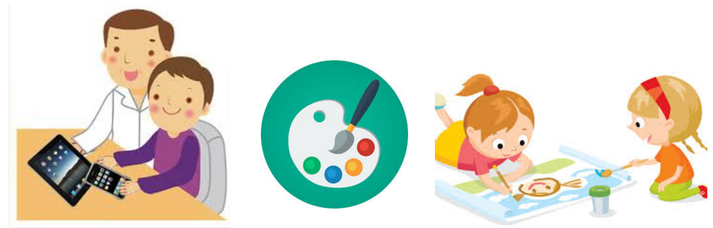
Secondary analysis of saved drawing

Significance to Clients and Families at Holland Bloorview

Increased understanding of underlying brain mechanism of **social cognition** in **Autism Spectrum Disorder**

Increased understanding of **child development**

Art-based therapies and studies



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