The first haptics hackathon—Hapticathon—took place in Poznan, Poland this month. The event was organized by Slawa Madelska from an eCommerce agency, White Ducky, in cooperation with a software house, Programa.pl.

Eight interdisciplinary teams consisting of 40 participants rose to the challenge and spent 24 hours developing their apps for the TPad, a surface haptics display. The event began with an inspirational keynote presentation of world trends in haptics followed by a technical specification of the surface haptics features of the TPad. Afterwards, teams worked intensively during an ideation session and used the value proposition canvas model to finally arrive at one main idea for their project. After receiving feedback from mentors, the teams were ready to begin and started coding and preparing their pitches. Later that day, Joe Mullenbach from Tangible Haptics, the co-creator of TPad, joined the event via a skype call and answered questions concerning the participants’ projects.

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After 24 hours of hard work, the presentations began. Seven teams successfully completed their apps and gave demonstrations of their projects. The mentors decided that the winning app was Touch Guide—a fully functional app designed to help visually-impaired people navigate inside public buildings via haptic maps (see Fig. 1). It opens with voice commands, uses haptic maps (pathways are marked as smooth surfaces and walls/obstacles as rough ones), detects the type of touch on the display and reacts (two fingers in contact changes the maps, three fingers takes the user back to the home screen), and gives navigational feedback in the form of vibration.

Two other apps earned distinction. Happy Tappy—an app meant to help children with sensory integration problems. The app opens and the contours of a dog appear in the form of haptic dots - the user hears “it’s a dog, draw his torso, draw his tail...” and when the dots are correctly connected the dog becomes alive and the user sees an animation. The second was Touch’n Buy an eCommerce app that enables users to feel the textures of products such as tiles, the surfaces of wooden tables, etc.

The other apps developed were:

- THabits—an app that is designed to fight social media addiction. The user sets a daily limit for social media usage and when the limit is reached, the surface of the display becomes rough and uncomfortable to use.
- Haptic Markers—a modern, no interface, natural haptic interface that allows users to browse text documents without looking at the screen. The user can browse words, highlighted text, etc.
- Lang Hub—a language learning aid. The user can hear the word, see its melody line and feel the intonation of words displayed with their fingers. This app is especially useful when learning Asian languages where changes in pitch can sometimes change the meaning of words.
- TouchPin—an app aiming to increase the security of ATM transactions. Users cannot see the PIN on the screen but they can touch the numbers and in this way check the correctness of the PIN.

All the apps were developed in Open Source and are available at: https://github.com/Hapticathon

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The mentors were Piotr Tuszyński from HardGamma Ventures, Piotr Biegun from Whalla Labs, Michał Krawczak from Centrum Humanistyka Technologia Sztuka, Wojciech Radomski from Programa.pl, Mateusz Madelski from White Ducky, and Tomasz Czapliński from the SpeedUp Group.

Full coverage of the event can be viewed at: http://whiteducky.com/x/hapticathon