PRESS KIT

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hap2U

CES INNOVATION AWARDS 2020 HONOREE

Press Relations

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Dr. Cédrick Chappaz is a scientific researcher from CEA-Leti and the R&D unit at STMicroelectronics who worked in microtechnologies for 10 years with the conviction that microsystems would one day change how we communicate.

His initial research work involved a technology capable of changing the surface of a mirror to correct image distortion caused by atmospheric layers. He then studied other applications for this technology with the challenge of reproducing the texture using haptic feedback solutions.

Cédrick focused his research on this technology for four years with €2 million euros of government funding as part of an innovation process undertaken by STMicroelectronics in close collaboration with CEA-Leti, Orange Labs, INRIA and the Universities of Grenoble and Lille.

Encouraged by the success of his project and the enthusiasm of stakeholders, Cédrick Chappaz co-founded HAP2U with Robert Monteillier in early 2015 with the goal of industrialising his haptic technology.

He began his entrepreneurial venture with a single employee. A few new hires arrived (the company had 11 employees in 2018), and, today, HAP2U has reached a 40 people team to respond to the excitement from manufacturers who see haptic technology as an undeniable innovation to improve the user experience of their future products/machines.

Cédrick Chappaz
CEO

HAP2U designs and develops patented technology to enhance experiences in the digital world by integrating the sense of touch in tactile devices. A new haptic universe is now possible with the world's thinnest and most reliable haptic technology, using materials and manufacturing processes well-known in the semiconductor industry. Founded in 2015, HAP2U was built on several years of research and development, with seven global patents in hardware and software based on the science of haptics. The team, based in Grenoble, France, brings complementary expertise in material science, haptics, acoustics, embedded systems, electronics, software development and user experience to feel what is on their tactile interfaces.

WHAT IS HAPTICS?

The word "haptic" is derived from the Greek word "hapesthai" meaning "to contact" or "to touch." Therefore, the science of haptics studies the sense of touch and the interactions between tactile sensations, the world around us, and technology. It is a science that includes all dimensions of touch: thermal (feelings of warm/cold), pressure (feelings of hard/soft), and perception of matter (texture, roughness...). New technologies have emerged that rely on these different dimensions, for example force feedback to perform remote surgery or vibratory feedback on a mobile device. HAP2U has developed an innovative technology based on the sensations generated by the friction of a finger on a surface. This simulates a third dimension on a smooth surface like a touch screen, providing a completely new experience to the user.

TOUCH & FEEL WHAT IS ON YOUR TACTILE INTERFACES

With HAP2U the user experience enters in a new era. Its technology brings an additional sensorial dimension to any tactile surface: the sense of touch. Just by tapping or sliding your finger on the screen, you feel like you are turning a real knob, pushing a real on/off button and perceiving various textures.

As humans, we learn about the world around us not only with our eyes and ears, but also with our fingers. Increasingly, touch screens make our interactions with technology simplified and streamlined. We find them everywhere: in our cars, in our pockets, in our kitchens...at work and in play. While we interact more and more with tactile surfaces, we are missing a key dimension: touch feedback.

OUR SOLUTION

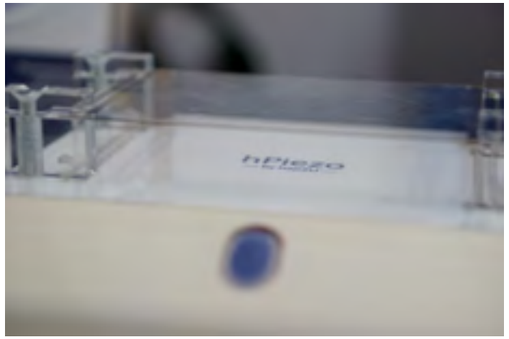
Our solution responds to this increasingly interactive world with a one-of-a-kind patented haptic technology. It is based on seven areas of expertise: material science, haptics, acoustics, embedded systems, electronics, software development and user experience. By combining these fields with the world's thinnest and most reliable haptic technology, the hPiezo™, HAP2U creates the sensation of touch on any tactile surface such as glass, wood, plastic and metal, with any kind of shapes.

APPLICATIONS

Our partners in mobile, automotive, retail, disabilities, home appliances and manufacturing industries have already imagined new use cases to improve user experiences with our different demo of SDK and through customized proof-of-concept projects. Our technology can be used for ergonomic functional, informative, pedagogical and amusement purposes. All that's needed is a little creativity to enrich the user experience with haptics!

ABOUT THE hPIEZO™

HAP2U has developed the hPiezo™ to be seamlessly integrated into all of our everyday devices, changing the user experience and the way that we, as humans, interact with technology.
hPiezo™ is the world's thinnest haptic technology - an ultra-thin piezo film deposition process, returning the sense of touch to everyday interactions with devices.
A world first, using materials well-known in the semiconductor industry, the hPiezo™ is among the most reliable technologies available. This patented process optimizes manufacturing costs for all mass production markets.



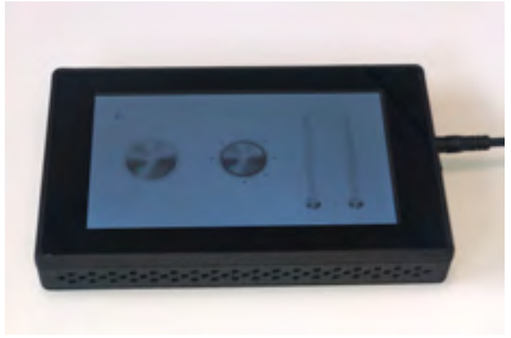
ABOUT THE XPLORE TOUCH™

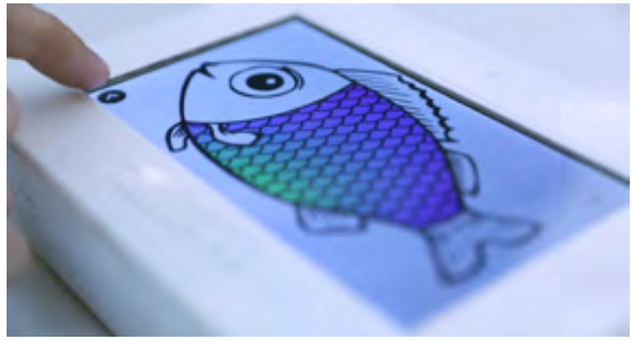
Not just a development kit or a demonstration kit, the Xplore Touch is 2-in-1: a 7-inch screen with haptic feedback, available to explore the possibilities offered by this disruptive technology. The Xplore Touch is equipped with a Haptic Creation Tool software application as well as low-energy Bluetooth to connect real HMI control interfaces with wireless interaction. With this combination of hardware and software, users are fully autonomous in developing and testing their haptic applications.

ABOUT THE HAPTIC CREATION TOOL

Adding texture and touch feedback to devices is as simple as painting a picture, with the user-friendly interface designed for non-experts. With this software, pre-installed on the Xplore Touch, users are autonomous in building their own haptic feedback canvases and human machine interface applications. All that's needed is a little creativity to enrich the user experience with haptics!

Features enabled include the foundations of a growing haptic library built from HAP2U's customer base: from feedback mimicking textures to command applications.





ABOUT THE MATERIAL PADS™

Those Pads were developed for CES 2019. They demonstrate the HAP2U technology on hard materials as wood, plastic, glass and metal. Thanks to them, our partners can test the benefit of haptic feedbacks on tactile surfaces without a screen on a 4mm thick demonstrator.

ABOUT THE 3D RING™

After demonstrating our haptic solution on hard materials, we developed the concept with a generation of feedbacks on different shapes! It is now possible to have haptic feedbacks on curved screen and 3D buttons. No need for a mechanical movement anymore, you can rethink all interfaces with haptic feedbacks.

ABOUT THE HAPTIC PHONE™

Improving the interaction of all users with a screen leads us to demonstrate the value of such features on a Smartphone.

Thanks to this **CES 2020 Innovation Awarded product**, you will feel the new experience of having dynamic textures on your common Apps and understand the benefit of this game changing innovation.

From discovery to Proof of Concept (PoC)

1- Discovery

Being a sensorial technology, you need to touch our haptics to fully understand its potential.
That is why we are always happy to meet you to let you experience our demos.

2- Proof Of Concept

Once you are convinced by our demos, we can go further together with a Proof Of Concept.
The objective is simple : We prototype our technology into your environment or applications.
This custom prototype can then be shown to management or customers of yours for example.

• Workpackages
- PoC Definition & Specifications
- Design & Modelling
- Engineering & integration (hardware & software)

From Proof of Concept (PoC) to Mass production

3- Technology Transfer

• Technical Knowledge transfer (Mechanics, software, hardware, embedded systems)
• Supply chain management (Bill of Material and according suppliers)

4- Industrialization

• Pre-qualification according to automotive standards done and OK :
- Noises tests (audible & ultrasonics)
- Functionnal tests (lifecycle & field tests)
- Environmental tests (EMC, Thermal cycle, Humidity)
- Mechanical tests (glue grip, vibration)

• Support on process and means development.

HAP2U TEAM


Cédrick


Franck


Robert


Bruno


Caroline


Diane


Matthieu


Anne-Laure


François


Mickaël


Jean-Baptiste


Baptiste


Matthieu


Pierre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Maxime


Maxime


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