

Acoustic Haptic Touch

ENCP 730 - Trevor Schachner

❖ Created by Jill Coffin

❖ Originally purposed for live artwork

❖ Potentially endless applications for electronic devices



Georgia Tech Research Corporation

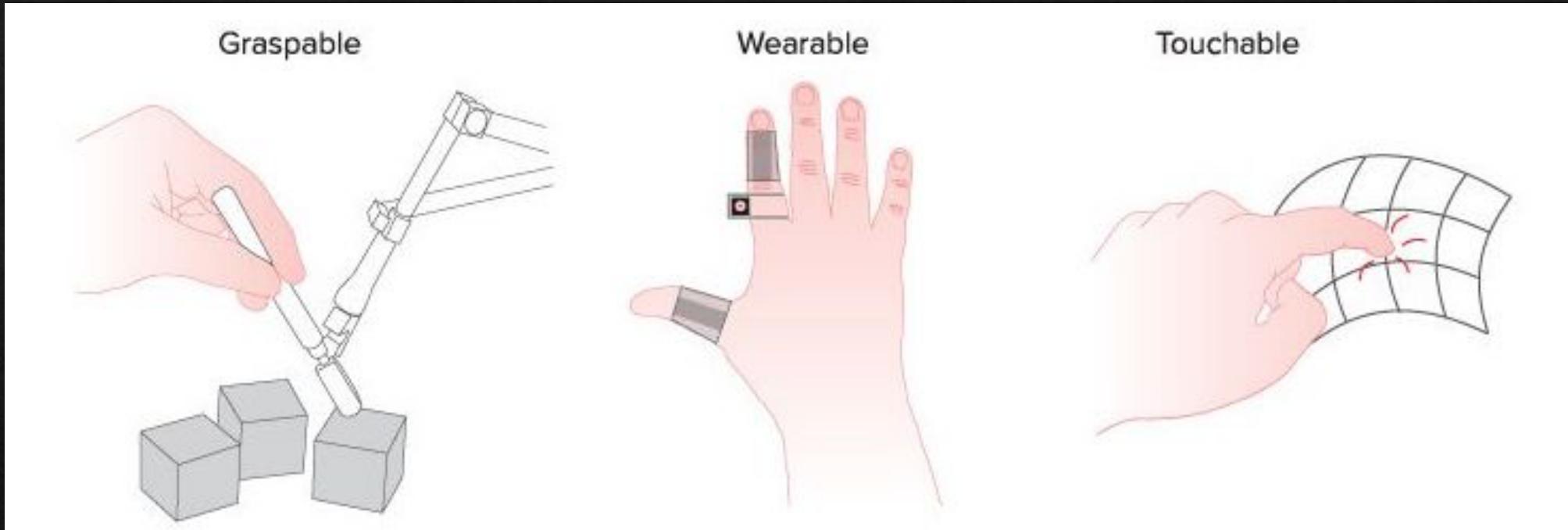
OFFICE OF INDUSTRY ENGAGEMENT

Technologies Available for LICENSING

<https://industry.gatech.edu> | ashton.harrison@gtrc.gatech.edu

Translating Sound into Soft Touch for Haptic Devices (#5433)

- **Low cost:** Uses components that are less expensive than other high-tech options
- **Better response:** Responds more quickly and more refined/granular than existing products with slow and/or coarse responsiveness
- **Enhanced performance:** Achieves a silent, smoother, pulse-like response rather than an unpleasant push or buzz
- **Soft, compact interface:** Embeds easily into textiles and other products requiring flexibility (e.g., textiles) or portability (e.g., computer mice)
- **Controllable:** Distributes sound wave pressure across a specifiable, localized area
- **Customizable:** Reconfigures easily to achieve a variety of distinctive tactile outputs



- ❖ Acoustic Haptic Touch can be integrated into all types of existing devices

❖ Consumer Electronics

❖ [1] “Global consumer electronics market expected to reach approximately USD 1,787 billion in 2024, growing at a CAGR of slightly above 6.0% between 2018 and 2024.”

❖ Virtual Reality Gaming

❖ [2] “Global virtual Reality (VR) market will reach USD 26.89 billion by 2022, growing at a CAGR of 54.01% between 2017 and 2022.”



[1] - Zion Market Research - <https://www.zionmarketresearch.com/report/consumer-electronics-market>

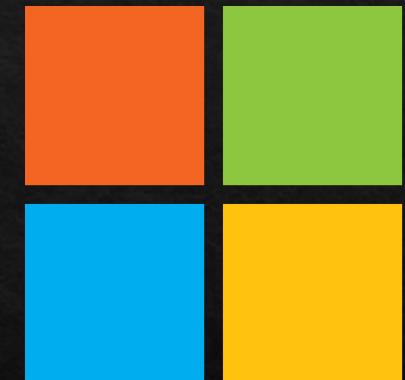
[2] - Zion Market Research - <https://www.zionmarketresearch.com/report/augmented-and-virtual-reality-market>



immersion

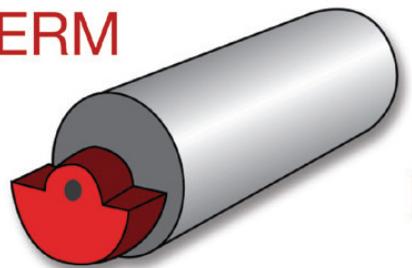


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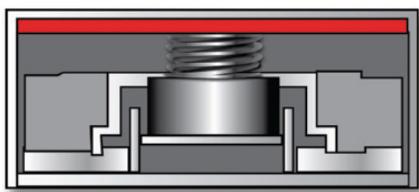


Haptic Actuators

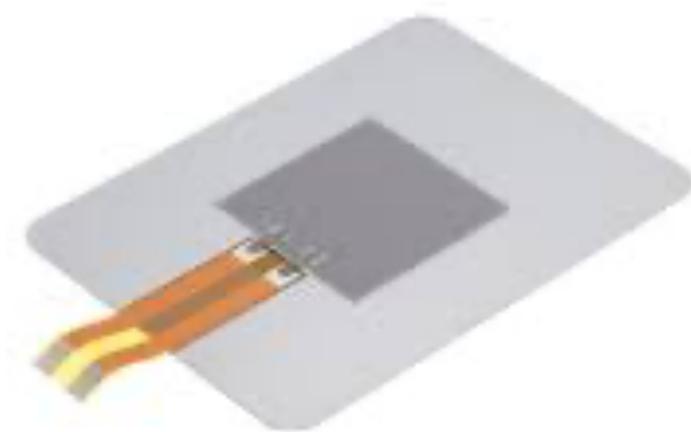
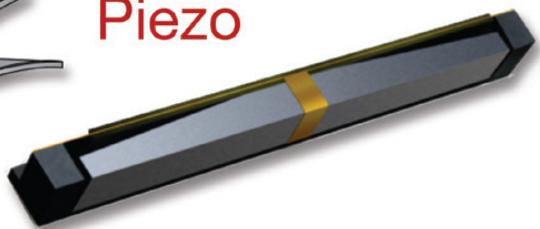
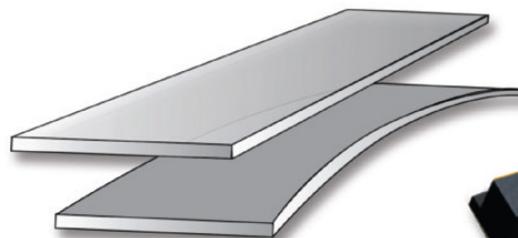
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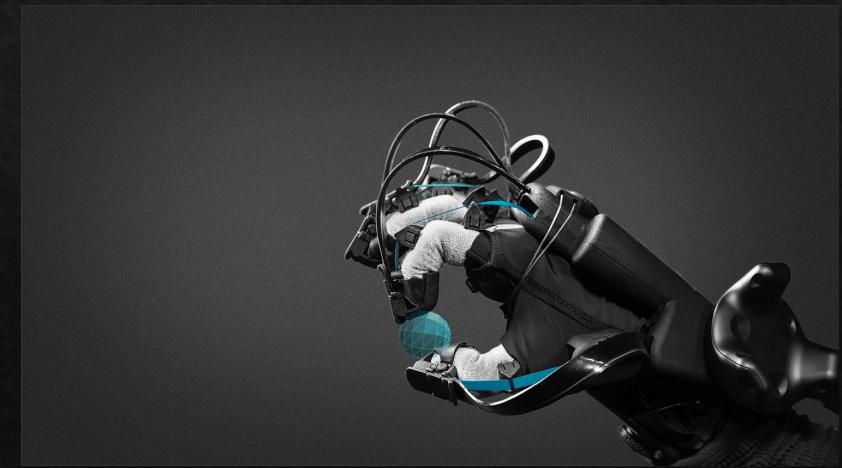


LRA



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Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
 Consumer Electronics <ul style="list-style-type: none"> - Logitech - FitBit VR Gaming <ul style="list-style-type: none"> - Oculus - VR controllers - Valve Index - HaptX 	 Development Production  Customer Acquisition IP (licensing) Software (integration) Designers Manufacturing facilities	 Acoustic Sound converted to Haptic Touch Feedback Increased Efficiency of actuators Smaller Actuators Realistic feedback sensation *Flexible Material Integration*	 *Co-Creation* Supplier/Service Provider  Original Equipment Manufacturer (OEM) Consulting / Product Integration	 B2B Consumer Electronics Virtual Reality Gaming
Cost Structure	Revenue Streams			
 Patent Licensing Upfront Development Facilities Employees Materials Marketing/Sales	 Direct Sales Consulting Co-development Contracts			