Gerontechnology: From Research to Daily Applications

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3G’s for the aged society: Gerontology, Geriatrics, Gerontechnology

- First International Congress on Gerontechnology, 1991
- International Society for Gerontechnology, 1997

“Design technology and environment for independent living and social participation of older persons in good health, comfort and safety”

- Scope of Gerontechnology: Health, Housing, Mobility, Communication, Leisure, Work
To carry out a successful industrial and educational experiment

Gerontechnology Research Center Yuan Ze University

Commercialization

Research & Development

Industry-Academia Collaboration

New Taipei City

Transdisciplinary Education

Innovative Product Development Program

Design Thinking

Transdisciplinary education program

International Society for Gerontechnology

International academic exchange

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Are you using telehealth systems to care the older adults at home?

Wearable devices or, Leap beads 智慧佛珠?

Smart home, smart wheelchair, smart anything?
Designers vs. Technologists

Which do you think the older adults will like better?

Which walking stick do you like better?


Smart Standard Walking Stick (Auto-Fall-Alarm/Radio/MP3)

- 4 Pivoting Angle LED Lights
- Charging Point (SV/USB)
- Flashing Lights
- 10 Step Adjustable Height: 68 - 90 cm
- Locking Collar
- High Strength Aluminium Shaft
- Soft Pivoting Head Self Standing Base

Selection Switch:
- LED/LED+Flashing/Off
- Activate/Deactivate Alarm (H/Press 3 sec)

Speakers (Alarm)

Soft-Grip Handle Handy Wrist Cord

Micro SD Card Slot

Volume Key:
- Up
- Down

Scan Key:
- Forward
- Backward

Selections Key:
- On/Off (Pressing)
- Radio/MP3 (Hold-Press)

Net Weight: 520g
Persuasive technology: How to create that new behavior?

• User Centered Design: NEEDS ≠ MOTIVATION

More fun than functions...

Fogg Behavior Model

B = mat
at same moment

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If the telehealth system is used to connect the older adult with family members...

THE SON IS THE TRIGGER

CARE, INTERACTION, CONNECTION, IN ADDITION TO HEALTH MONITORING
We are designers: Find that trigger!

- User experience design
- Design thinking!

IDEO (http://www.ideo.com)
CEO Tim Brown
Bring gerontechnology research to daily living

- Start-up company founded in 2016

Creativity ➔ Prototype

➔ Product ➔ Sales
AIoT bedroom: Transform artifacts in everyday lives into Internet of Things

- **WhizTouch**: IoT light / call button
- **WhizPad**: sleep monitoring / leave bed alert
- **WhizCarpet**: mobility monitoring / fall alert
- **BP and BG Measurement**
- **MiBand**: for indoor tracking
- **WhizConnect**: Bluetooth devices

Personalized information on mobile devices
WhizPad is a very comfortable mattress capable of motion sensing

- Special foam to reduce the risk of bed ulcer
- Leave bed alert in 3 stages to reduce risk of fall
- In-bed activity / sleep quality monitoring
Serious gaming for dementia patients

- Physical exercise/cognitive training/multi-sensory stimulation
- Caregivers may customize the games

Matching game

Chasing game

TUG
Transdisciplinary learning
Real world problems and experience

• 18 hours, 1 credit design workshop
• 12 credit undergraduate program
• 2-year master degree program

“DESIGN” is our common language...

Thank you