

# Facilitating Social Connection for Isolated Seniors

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**TAG**  
lab



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# Introduction

## About the TAGlab:

- Health, **well-being**, and graceful aging of seniors
- Identify where technology could serve human needs and **enable greater inclusion** in life and in society
- Design and develop technology that can have a positive impact on the lives of Canadian seniors

# Introduction

## Families in Touch (FIT) Project:

- “Social connections have a strong association with **increased well-being**, both physical and emotional.” (Edelbrock 2001)
- Goal: To **facilitate social connection for isolated seniors** through the use of technology
  - design research
  - develop a prototype based on informed design choices

Edelbrock, D., Buys, L., Creasey, H., & Broe, G. A. (2001). Social support, social networks and social isolation; The Sydney older persons study. *Australian Journal on Ageing*, 20(3).

# Outline

- **Background**
  - Challenges
  - Context
  - Previous work
- **Our Approach**
  - Augmenting past work
  - Design research study

# Background: Challenges

- Seniors have **different needs**:
  - Physical decline
  - Cognitive decline
  - Less familiarity with technology

# Background: Context

- **Industry partner:**

- 250 locations across North America
- 30 000 employees
- Home care, retirement residences, long-term care



# Background: Previous Work

- **Picture Frame prototype:**

1



Frame is touched by an isolated person

2



Message is transmitted to family members in picture frame: "I'm Thinking of you"

3



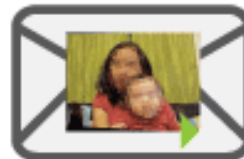
Message is received by family members through email

4



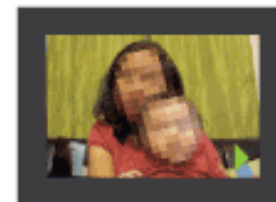
Video message is recorded by a family member

5



Message is sent back to picture frame

6



Frame owner is notified of a new message, which is then played back

# Our Approach

## 1) Augmenting previous work (Picture Frame):





# Our Approach

## 1) Augmenting previous work (Picture Frame):



# Our Approach: Design Research

## 2) Design research study:

- **Stakeholders:** patients, their family and friends, their caregivers
- **Environments:** home care, retirement residences, long-term care facilities
- To identify **technology use patterns** and **communication needs:**
  - Observational studies
  - Focus group studies
  - Interview studies

# Our Approach: Design Research

## 2) Design research – technology workshop:

- Participants: seniors from Revera sites, TAGlab mailing lists
- Explore **different interaction possibilities**:
  - Different input devices: Kinect, Leap, Wiimote, tablet
  - Perform different scenarios/tasks:
    - input
    - multiple selection
    - searching/browsing
    - voice recording
    - navigating map



# Our Approach: Design Research

## 2) Design research – NFC:

- Near-field communication – another technology
- Allows seniors to interact with **tangible** objects
- Modes of interaction:
  - Place object on a tray
  - Scan an object with a scanner/NFC reader
- Seems feasible for communication with staff members, but difficult for communication between family members

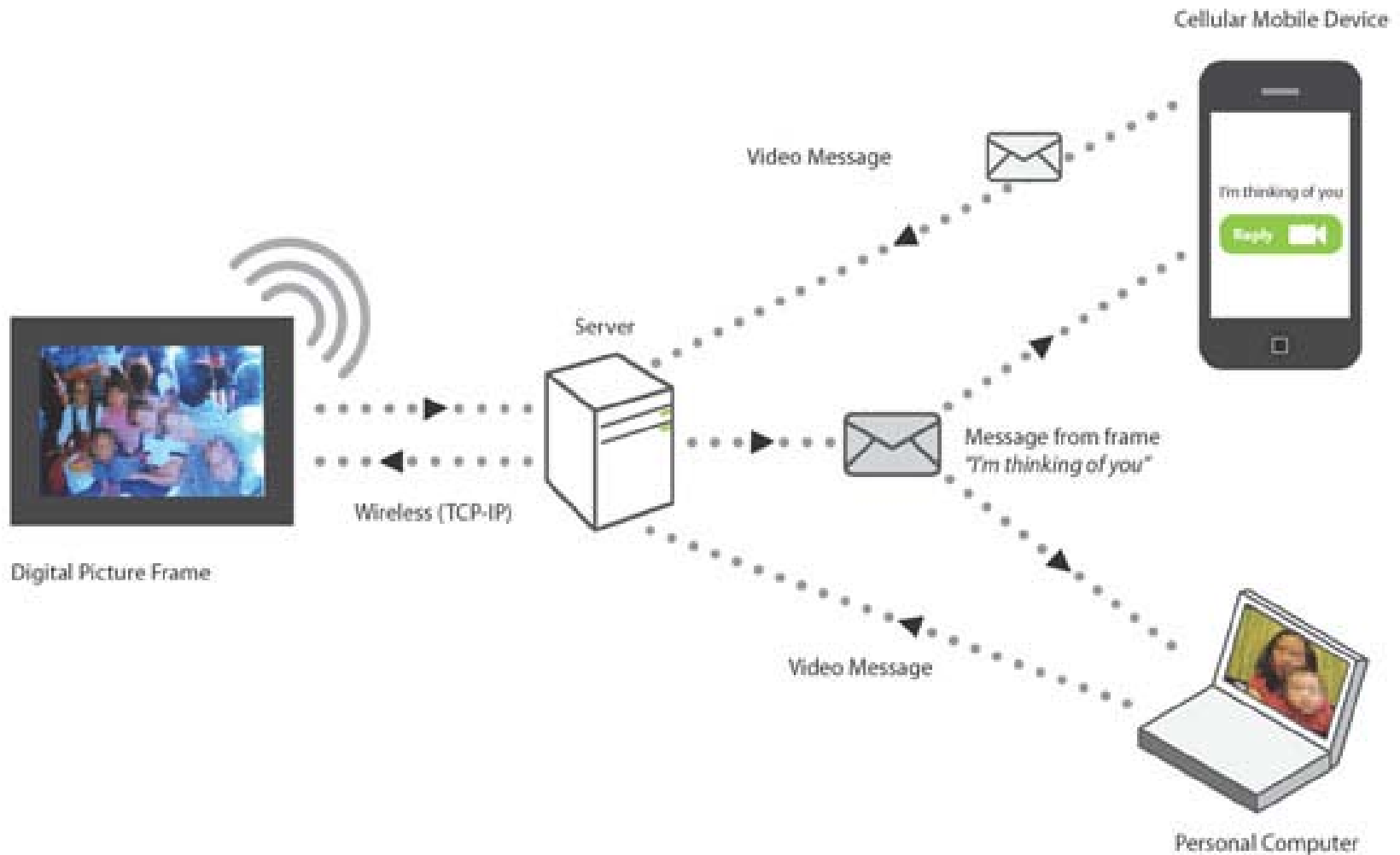


# Acknowledgements

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- Spencer Beacock
  
- Thank you!

Questions?

# Picture Frame Architecture



# Tech Demo Architecture





# Leap motion controller

## Demo link:

- [https://www.youtube.com/watch?feature=player\\_embedded&v=3b4w749Tud8](https://www.youtube.com/watch?feature=player_embedded&v=3b4w749Tud8)

# What is NFC?

- Short-range radio technology that enables communication between devices without direct physical touch
- Based on RFID (radio frequency identification)
- Open-platform technology
- Communication range is ~4 inches
- 2 devices:
  - A reader/writer:
    - Active device that generates radio signals to communicate w/ tags
  - A tag
    - Passive device containing antenna, small amount of memory, powered by magnetic field

