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# Moving Media Space Into The Home: Perceived Usage Scenarios and Privacy Concerns



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# The Problem...

- People want to share information with others about their lives and feel connected
- Technological solutions
  - Phone, email, digital pictures, video, video conferencing
- Yet there is a void because not seeing a person leads to not feeling connected

# Background

## 1960's Picturephone by AT&T



# Background

## 1980's Media Space by Xerox PARC



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# Moving media spaces into the home

- Has not been explored
  - Privacy concerns
  - Bandwidth issues

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## Research goal

- To investigate the use of domestic media spaces to connect distance-separated families, specifically using a media space with always-on video

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# Research questions

1. What ways would families utilize a media space in their home?
2. What privacy concerns do people have about using a media space in their home?

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# The Family Window

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# Evaluation and Results

- Evaluation
  - 2 families over 8 months (self-usage)
  - 4 families over 5 weeks
- Results
  - Impromptu conversation is important
  - Privacy not big concern

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## Results

- Tejinder K. Judge, Carman Neustaedter, and Andrew Kurtz. **“The Family Window: The Design and Evaluation of a Domestic Media Space.”** (To appear in) Proceedings of the ACM Conference on Computer-Human Interaction (CHI 2010), Atlanta, Georgia, April 2010.
- Tejinder K. Judge and Carman Neustaedter. **“Sharing Conversation and Sharing Life: Video Conferencing in the Home.”** (To appear in) Proceedings of the ACM Conference on Computer-Human Interaction (CHI 2010), Atlanta, Georgia, April 2010.

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## Evaluation (Pilot study)

- Interviews with 6 individuals (3 female, 3 male)
- Participants ranged from 23 to 34 years old
- 4 groups: single with no children (1), married with no children (3), married with children (2).

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# Method

- 3 part interview
  - Current pattern of communication and level of connectedness with extended family
  - Shown a video of the Family Window and asked for their opinion about the system
  - Asked about perceived privacy concerns when using the system

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# Perceived use of the Family Window

- Kyle is a 28 year old single male graduate student
  - Use the FW for pre-planned conversations with parents
  - Misses watching football games with his dad and wants to watch games together using the FW
  - Use the FW with his girlfriend
- “Using it [the Family Window] with my girlfriend would be like living with her” – Kyle, Single, Age 28*

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# Perceived use of the Family Window

- Maria is a 34 year old married female graduate student
- Use the FW to connect to her husband, sister and mother
- Imagines cooking with her mother using the FW and/or sharing recipes as well as watching and interacting with her nephew and niece
- She misses her family and the FW will help her feel closer to them



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# Perceived use of the Family Window

- Carlos is a 29 year old married male graduate student with 2 children
- Use the FW to connect to his parents
- Prefers it over video calls, more informal and he can share his children's play time and their other activities

*“The Family Window is good for busy families with no time to sit down and talk, it is not interruptive” – Carlos, Married, Age 29*

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# Perceived use of the Family Window

- Pedro is a 31 year old married male graduate student
- Use the FW to connect with his parents but does not want to change his lifestyle to be able to use it
- Prefer using the FW on a larger display so that it “*will be like a window, will have a big field of view and will make the room feel like it is extended*”
- Would like to use the FW to have lunch with his parents and imagines having a common dining table

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# Perceived use of the Family Window

- Michele is a 23 year old married female
- Very connected to her parents and sister
- Believes that the FW will help her feel more connected because she will be able to know when her parents and sister are home, talk about their respective days, see each other's homes and daily routines
- Using the FW will result in her not missing her parents as much as she is missing them now

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# Perceived use of the Family Window

- Sarita is a 33 year old married female graduate student with one child
- Use the FW to be more connected to her parents and sister and to share more about her daily life
- Wants to share things like her daughter's facial expressions and new haircut, all of which will be important to her parents
- Thinks that it is easier for children to communicate using a device with visual feedback

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# Privacy And Other Concerns

- Kyle usually does not care about his appearance or the appearance of his room but will have to start paying more attention to it when using the FW
- Concerned about watching his parents all the time
  - If his mum leaves the FW in her kitchen and he watches her while she is cooking, he will feel like a “*peeping Tom*”
- Does not want his parents to watch him while he composes his music

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# Privacy And Other Concerns

- Maria does not mind always-on video but does not want always-on audio
- Currently does not have any privacy concerns because she does not live with her husband
- Will not use blinds for privacy because she thinks she has more control over privacy by determining the location of the FW

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# Privacy And Other Concerns

- Carlos stated that in his culture it is important to pay attention to how a conversation is started and ended
- Does not want always-on audio as he wants to have private conversations with his wife without being overheard. Private about issues like healthcare and family finances
- It will be considered rude by his extended family if he uses blinds for privacy

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# Privacy And Other Concerns

- Pedro will be comfortable watching his parents if they are aware that he is watching
- It will be “*creepy*” to hear sounds from the FW all the time and hence does not want always-on audio
- Thinks that his parents will be offended if he uses the blinds



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# Privacy And Other Concerns

- Michele will be comfortable watching her extended family and having them watch her all the time
- Will place her FW in the living room as she usually only sits there to watch television
- Private about her married life and problems and will not want to share that with her parents

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# Privacy And Other Concerns

- Sarita does not want to use the FW as an always-on audio and video connection
- Shares highlights of her daily life with her parents but believes that if they watch her all the time they are bound to comment on the way she is raising her daughter  
*“Comments from my parents, even well meant ones will hurt me more than comments from a stranger.”* – Sarita, Married, Age 33
- Using blinds will be considered rude

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# Conclusion

- Limitation of second study
- Participants shared a variety of privacy concerns
- Blinds might not be enough for privacy

Despite these concerns, participants liked the idea of using a media space in their home and think that it will increase communication and allow them to be more connected to their distant family

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# Q & A