



IGD Horizon Scan

Tomorrow's Kitchen Technologies - Exploring the Impact



Quotes of a Mealtime Tester

*Our family quality time at the dinner table has improved by 150%, thus strengthening the quality of our family, our children's happiness, etc...
And it's much less stressful to make a great meal."*

*The Polara made it possible for me to prepare dinner during my daughter's morning nap, freeing me to be with the kids in the evening when they are tired and need my attention the most.
This system helps to address so many family issues that go beyond meal preparation, I cannot begin to list them all.*



The Internet Home Alliance

- Internet Home Alliance is a **cross-industry network** of leading companies advancing the home technology market.
- **Mission: to accelerate the development of the market for home technologies that require a broadband or persistent connection to the Internet.**
- The Alliance views the connected home as a series of three distinct, but related **ecosystems: family, career and entertainment.**
 - The **family** ecosystem is the domain of **family care**;
 - the **career** ecosystem is the domain of **work productivity** away from the office; and
 - the **entertainment** ecosystem is the domain of **purposeful leisure.**



What is MEALTIME?

Mealtime is a real-world test of a connected kitchen solution that enables consumers to use network-enabled appliances to simplify kitchen and meal preparation tasks.

Mealtime is the latest pilot in Internet Home Alliance's pilot program, which brings companies from various industries together to test how their products and services will work collectively in a connected home solution.







Appliances Integration Entertainment Flexibility Installation & customer service

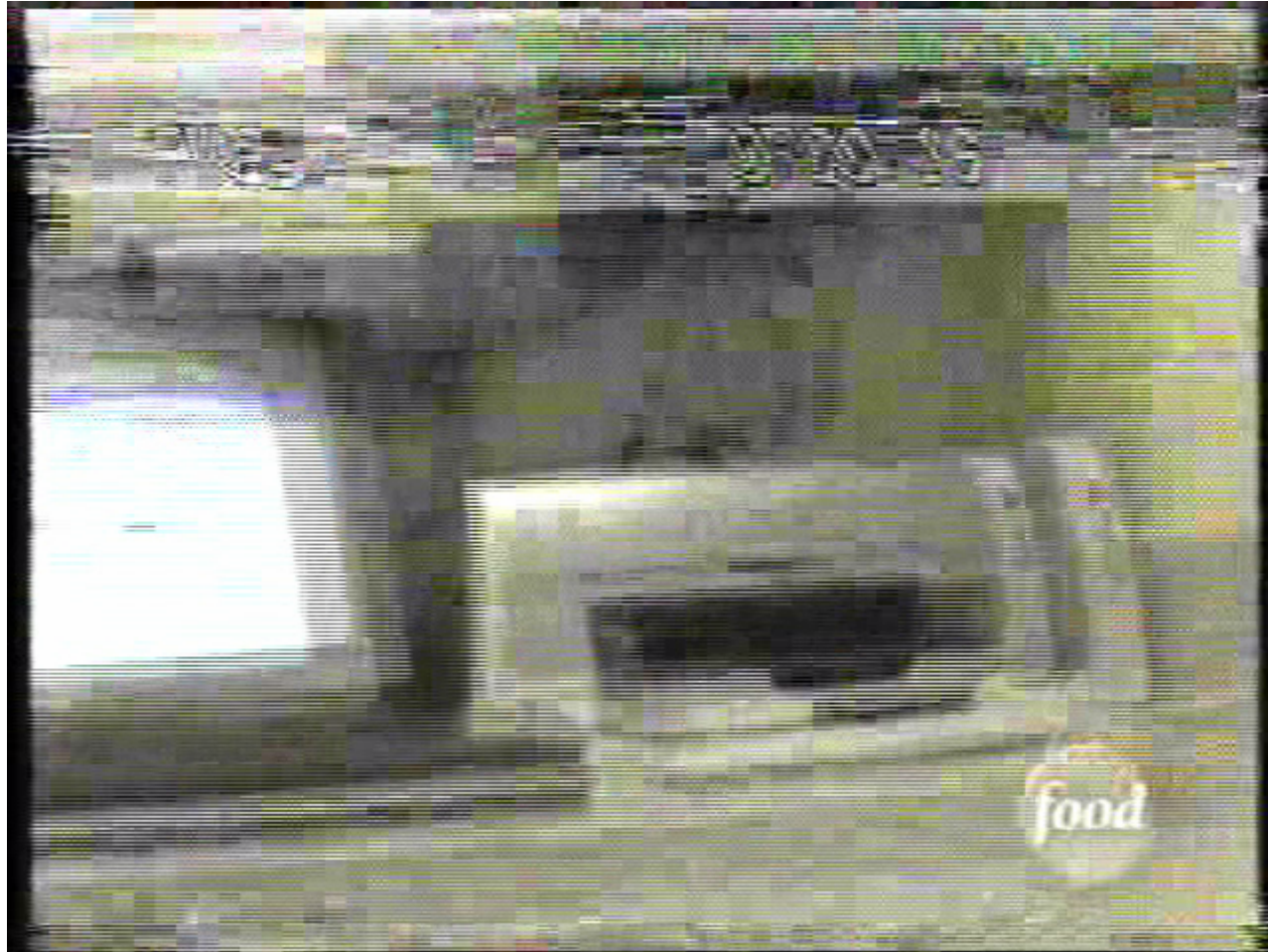








20 families in Boston, Mass.
For





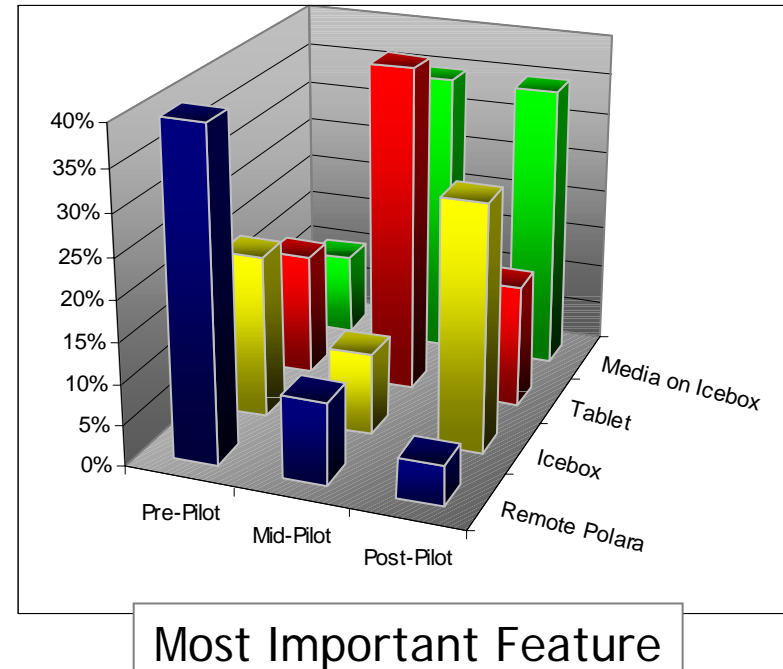
- How do consumers use the Internet from the kitchen?
- Do consumers prefer stationary or a mobile Internet display device? (i.e. is location of device important?)
- Do consumers use the display device for entertainment or information?
- Do consumers accept limited functionality on display devices?
- Do consumers use the appliance scanners?
- Are consumers able to self-install the networking component of the Microwave and Breadmaker appliances?



- Do consumers want to control their appliances remotely (i.e. outside the home)?
- Do consumers prefer stationary or a mobile Internet display device? (i.e. is location of device important?)
- Do consumers use a kitchen-based Internet display device primarily for entertainment or information purposes?
- Do value-added applications (e.g. Shopping List, Recipe Search, Calendar) drive usage of a kitchen-based Internet display device?

How do consumers use the Internet from the kitchen?

- ANSWERS
- Prior to the pilot, all features were deemed important
 - After the pilot, only Internet access via the Icebox and tablet devices are rated very important by the majority.
 - When asked what the *single most important feature* was, participants most likely named the remote access to Polara. This opinion eroded during the pilot to be replaced by the Icebox.

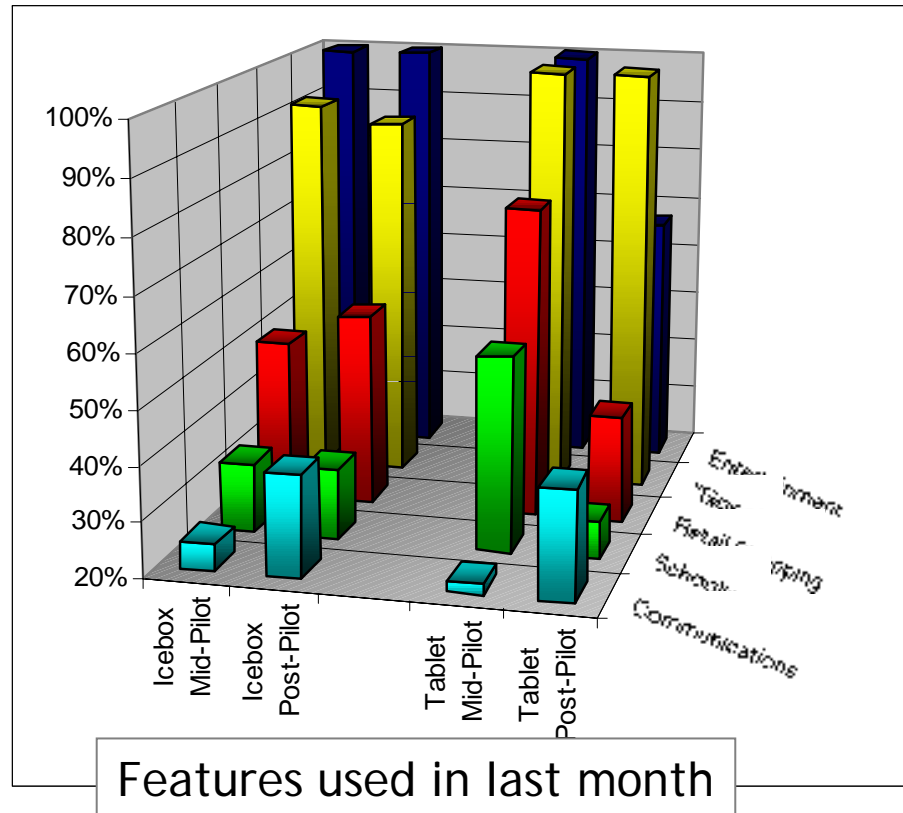


“Using Mealtime saves me an hour and a half each day. I can now coordinate dinnertime to fit everyone’s schedule and we can all eat together as a family...this means a lot to me.”

Do consumers use the display device for entertainment or information?

ANSWERS

- The two main uses of the displays were *entertainment* and *informational searches*.
- Other uses like online shopping, communications, homework and finances were significantly lower in their use.
- The tablet was used most consistently for informational queries ("Google")
- The use pattern over time for the Icebox was more stable than the tablet's.

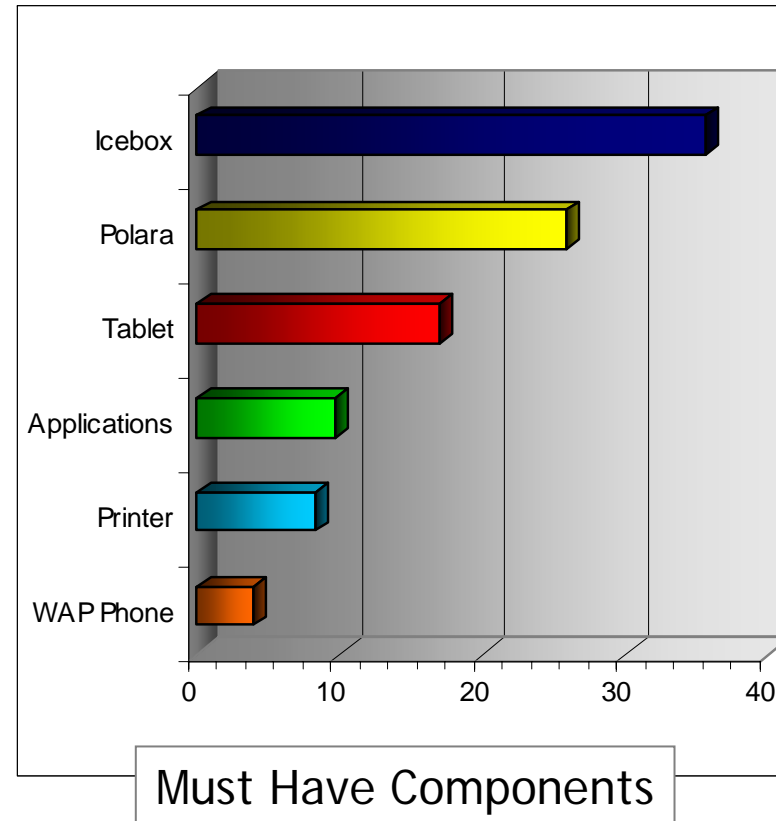


"The Icebox was a great inducement to getting the kids into the kitchen. Now that my 4 year-old son has seen what goes on in there, he always wants to help in the kitchen. "

Do consumers want to control their appliances remotely?

ANSWERS

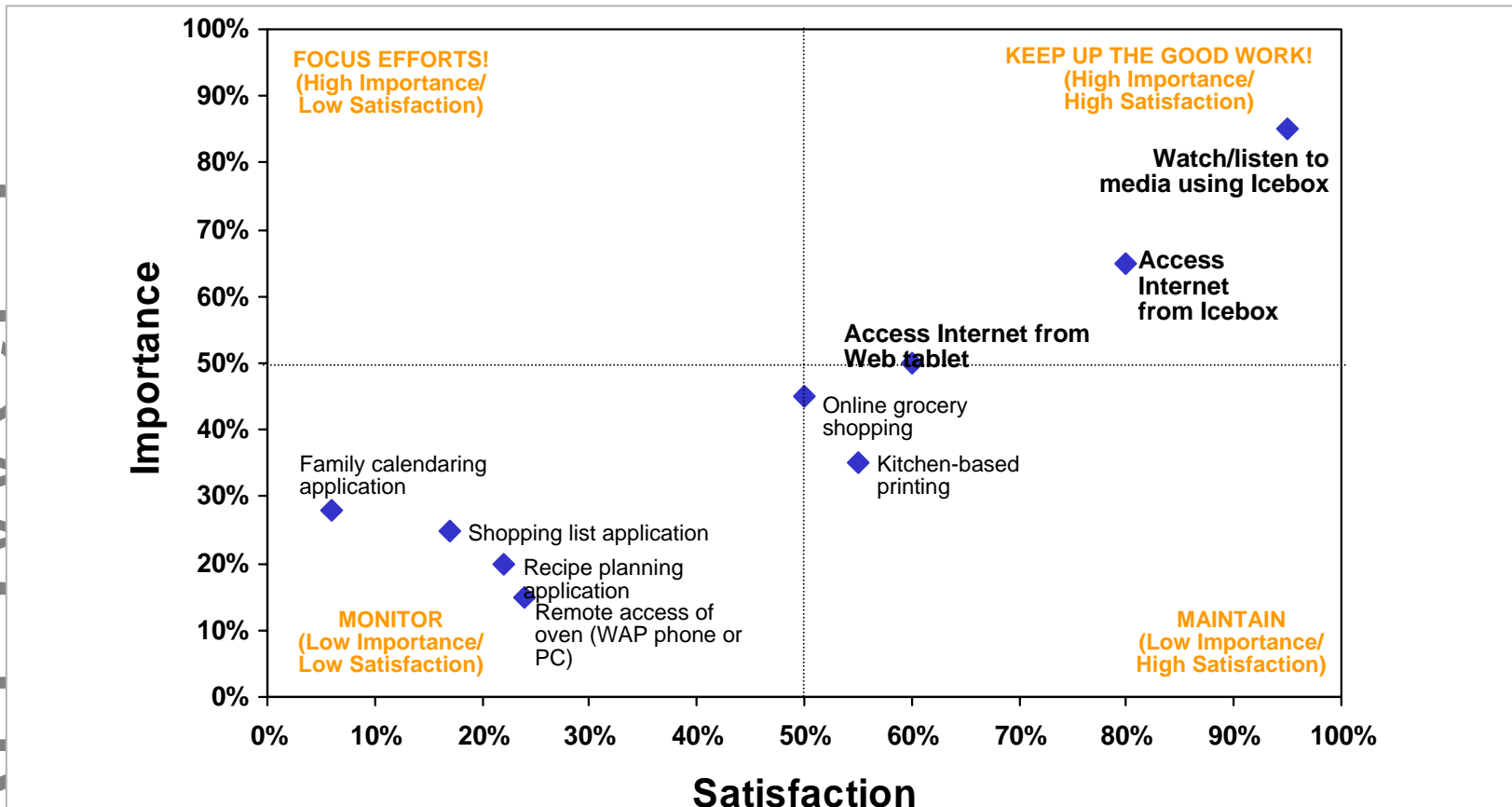
- The most important feature for the post-pilot family was the Icebox with 35.5 percent of all ratings. Polara was second with 25.8.
- Participants rating Polara a **must-have**: 80% pre-pilot, 75% mid-pilot, and 60% post-pilot.
- **Remote Status** was the most important application for Polara, using the tablet in-home.
- **WAP Phone** access was too complicated and too infrequent.



"I am no longer a slave to my kitchen - I'm liberated from my kitchen and yet I've never been closer to my kitchen. My kitchen works for me!"

Do consumers prefer stationary or a mobile Internet display device?

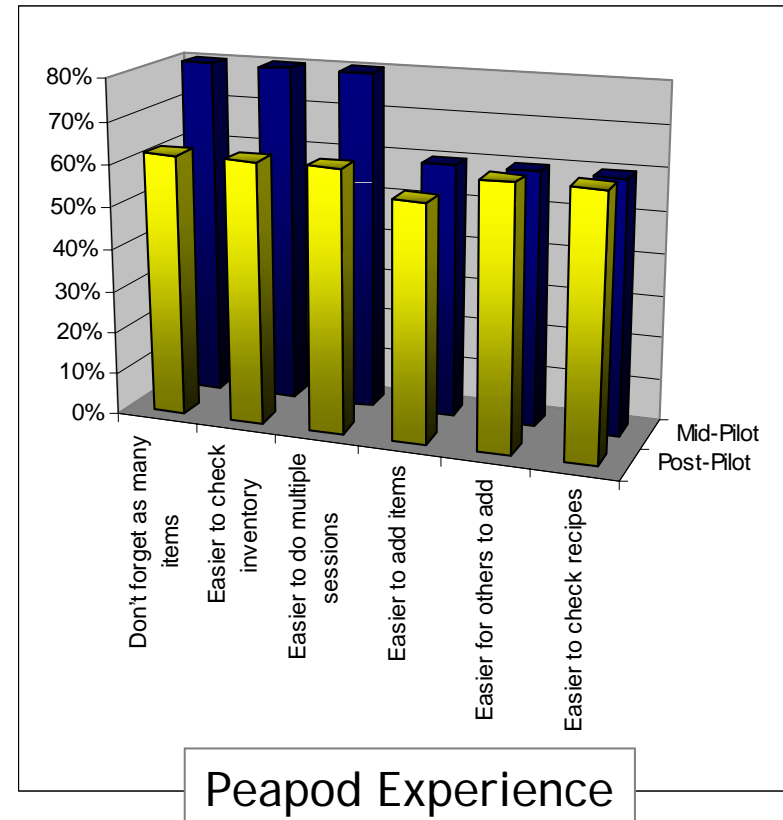
ANSWERS



“The Icebox has totally enhanced our home lifestyle. ”

Do value-added applications drive usage of a kitchen-based Internet?

- The majority of actions on Peapod were **View** and **Update**. **Print** and **Delete** were the least-frequent.
- Mid-Pilot, 50% of the testers expected to use Peapod somewhat more often. Post-Pilot, 22% use it more often and 11% use it much more often. There was no reduction in use.
- 55% of the participants used the Internet to search for recipes twice or more per month.

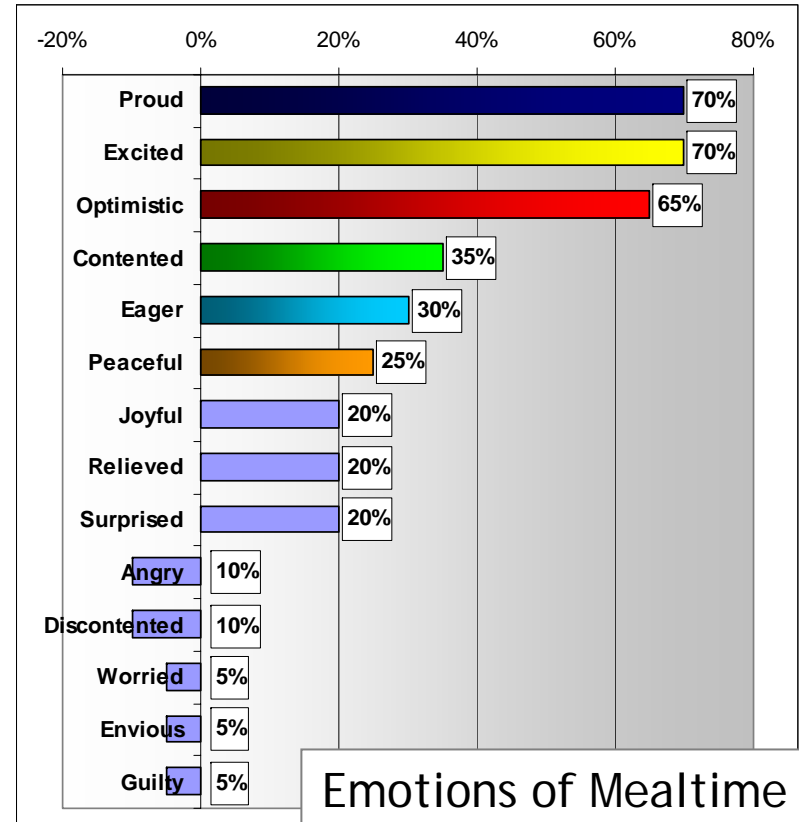


"Having the Icebox in the kitchen, I will sometimes add a product to my list immediately, when I use the last of it."

Overall Satisfaction with Meal Planning and Preparation

ANSWERS

- The most sizable increases in satisfaction are
 - "Time it takes to get dinner on the table"
 - "Nutritional value of home-cooked meals"
 - "Variety of dishes served"
 - "Level of organization in meal planning"
- Mid-Pilot, 5% were not at all satisfied, 45% neutral, and 50% very satisfied. Post-Pilot, 20% were not satisfied, 35% neutral and 45% very satisfied.



"Mealtime liberated me from the tedious job of meal planning and preparing and made me a happier person, so it made us all happy in my family!"



Emerging Consumer Needs

- Cooking to be More Entertainment, Less Chore
 - Dynamic & Interactive content
 - “Reverse Product Placement”
- More Trust in Food Sources and Ingredients
 - Organic Food trace always accessible
 - Ingredient List and Warnings
- Less Waste, More Fresh Food
 - Integration of Grocers into Kitchen Storage to manage packaged goods
 - Longer Storage Durations for produce
- Overcoming the VCR Syndrom
 - No more “blinking clock”, nobody reads the manual
 - I want to actually use the features I paid for
 - The appliance knows what I want when I need it

Within 10 Years

More Information in the kitchen

More Sensors

Sophisticated User Interfaces

A Little Later

Robots prepare whole dinners

The Unlimited Fridge

Zero-Cleanup



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More Information in the kitchen
Displays & Content Proliferate

More Sensors

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Within 10 Years

More Information in the kitchen
Displays & Content Proliferate

More Sensors
Detecting Problems

Sophisticated User Interfaces

A Little Later

Robots prepare whole dinners

The Unlimited Fridge
 Home

Zero-Cleanup
 everything



Within 10 Years

More Information in the kitchen
Displays & Content Proliferate

More Sensors
Detecting Problems

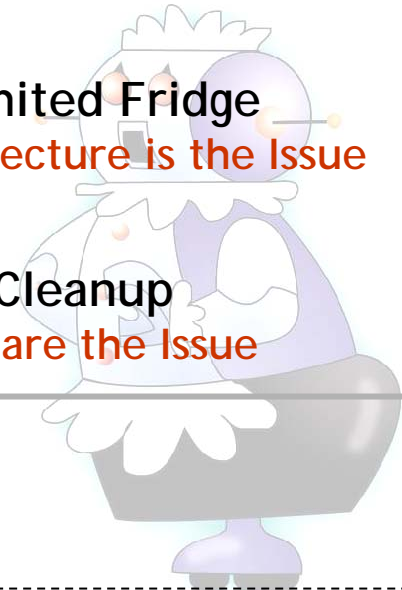
Sophisticated User Interfaces
Easier, more Robust Interaction

A Little Later

Robots prepare whole dinners
Versatility is the Issue

The Unlimited Fridge
Trust & Architecture is the Issue

Zero-Cleanup
Lawyers are the Issue



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