Goal: ~~Automatic Cooking~~ Assisted

(Turns out they already make this)
see: Home CHEF, iCook, SerpentB

Touch Screens
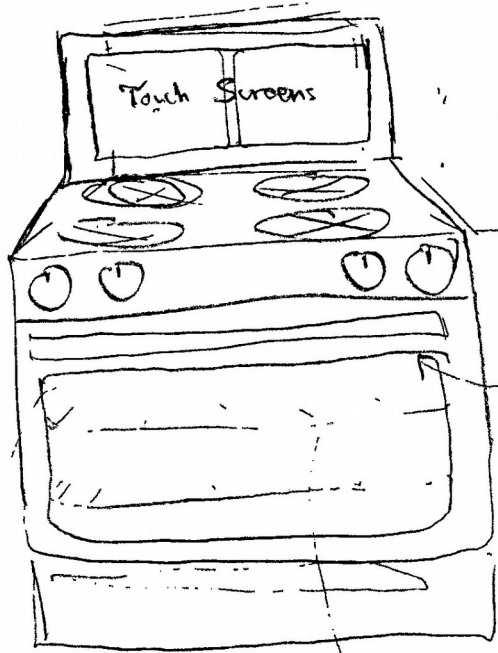
user flow

① select food type (beef, pork, chicken, casserole, vegetable, baking, etc.)

② select preparation style
- search
- pictures
- browsable categories

IOT automatic recipe database
↳ gives instructions on
pre - cooking steps

④ { request tray/ pan tare/scan
request meat tare/scan

③ preparation options
- medium, rare, well done
- Philly

pre-heat
timed, step-by-step instructions
for stovetop searing & other steps

⑤

126° ~~125~~ 126°

Built in meat thermometers
w/ removable,
dishwasher-safe "spike"
built into oven bar
& connected to CPU

problem: don't want to
preheat these!!!
make wireless instead

laser array for "seeing"
shape of food, differentiating
from tray

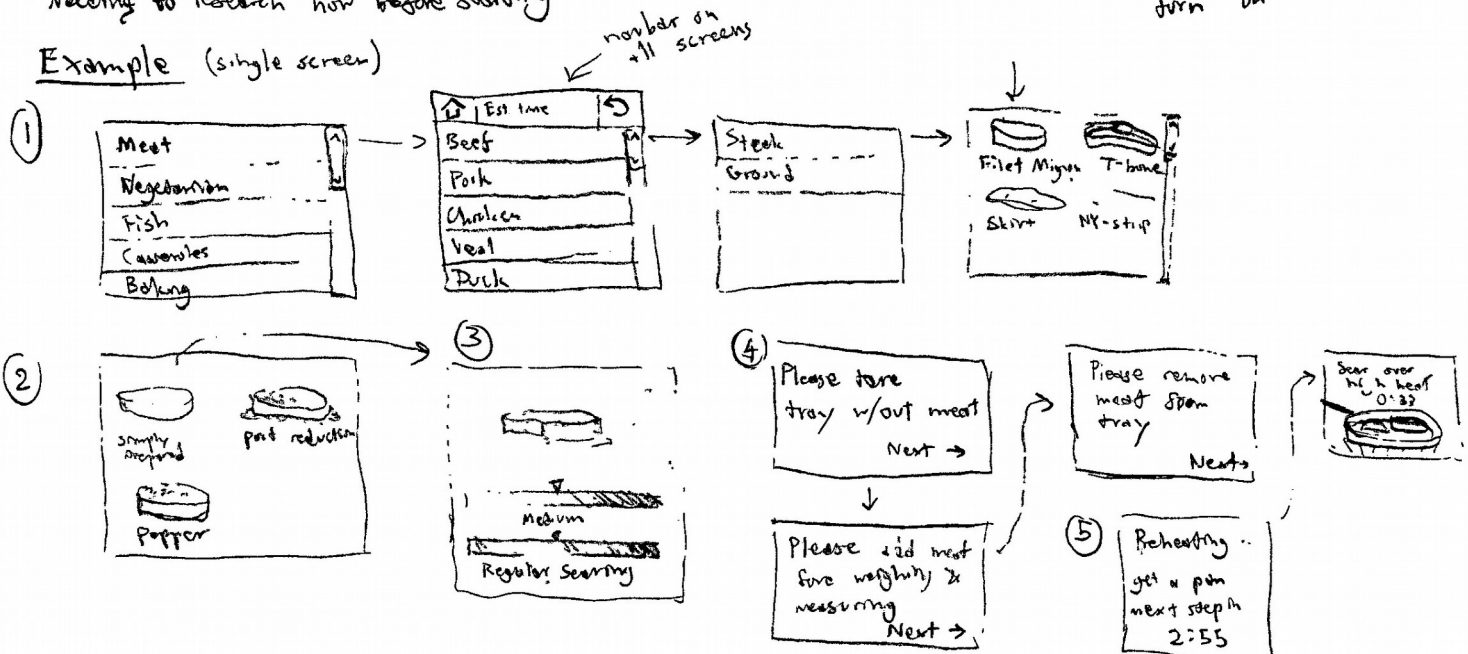oven racks sense
weight
turn w/ tray?

Problems Addressed
- Thinking of what to have for dinner
- Not knowing how to prepare it
- Needing to research how before starting

2 screens to prepare 2 foods at
once if possible (similar oven temp w/
different timing, 1 oven 1 stovetop.
etc.)

Oven-hood auto
turn on

<u>Example</u> (single screen)

number on all screens

①
| Meat |
| Vegetarian |
| Fish |
| Casseroles |
| Baking |

⌂ Est time ↻
| Beef |
| Pork |
| Chicken |
| Veal |
| Duck |

| Steak |
| Ground |

Filet Mignon   T-bone
Skirt   NY-strip

②
simply prepared
port reduction
Pepper

③
Medium
Regular Searing

④ Please tare
tray w/out meat
Next →

Please add meat
for weighing &
measuring
Next →

Please remove
meat from
tray
Next →

Sear over
high heat
0:33

⑤ Preheating
get a pan
next step h
2:55

Cognitive Modeling: Activity Theory
Breaks down Activity (Cooking) into discrete Actions & Operations (Individual Steps)
↳ Activity Centered Design

Distributed Cognition
↳ familiar oven layout, control location
familiar touch-screen style GUI

External Cognition
Knowledge of recipes in IOT database, offloaded from user

Signifier:
Thanks to distributed cognition (familiarity of oven mechanism, tablet-like interface) the user
assumes "regular oven functionality + information")
GUI uses visual display of prepared foods, w/ direct visual feedback for sliders

Affordances
touch screen — Direct Interaction: touch desired food, slider gives immediate visual feedback of how well-done
handle of oven door
Manual Dials for stovetop burners

Ideal testers:

People who typically don't devote much time to learning new recipes (bachelors, professionals)
    Ideal groups to see the effectiveness of integrating the externalized knowledge into the oven.
More experienced cooks (stay-at-home moms / dads)
    Get a typical user profile of how valuable / helpful new features are to main target market
Experienced chefs
    Feedback on recipes, advice

Evaluation of Success / Failure

Baseline: Determine how much time it takes for people to prepare certain recipes that they must research in a book or online

Determine how much, if any, time is saved by the more advanced HCI integration of the oven.
Survey test takers of their personal experience using the system, since even if it takes the same amount of time, it might be more enjoyable.

Failure is a 0 perceived or actual value added situation: in this case, that there is no improvement in cooking efficiency or cooking enjoyment.