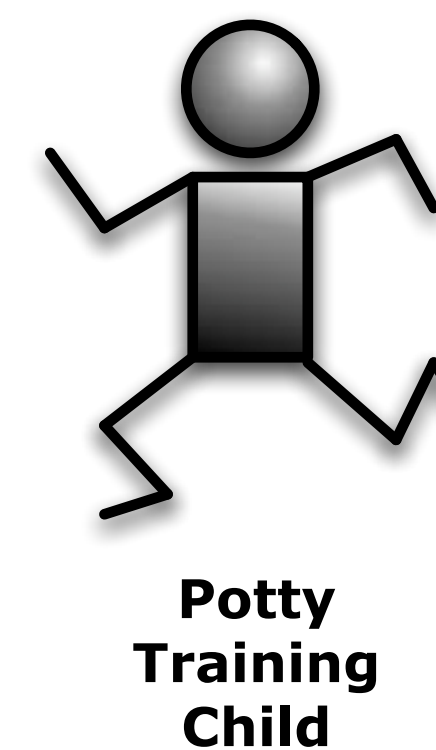
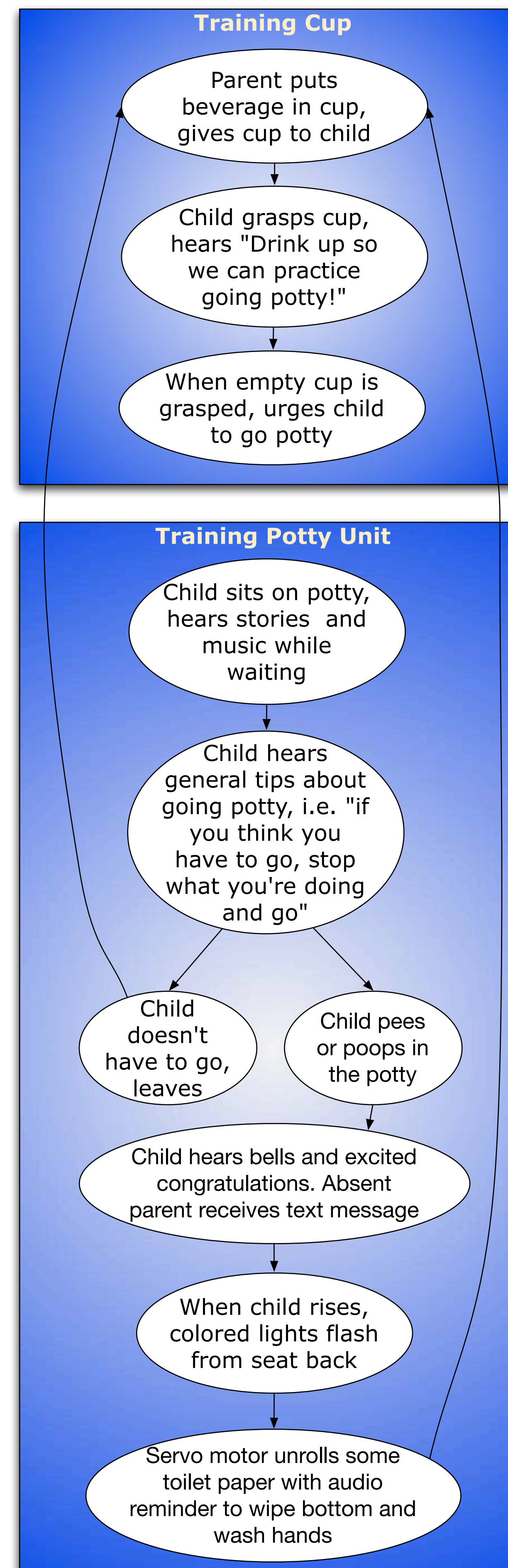
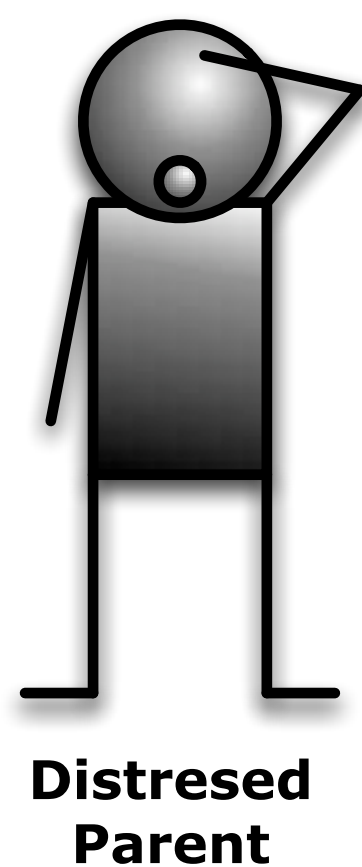


Potty Party



To go, or not to go?



Design

Initially we had many ideas to extend the scope of this project ranging from including an LCD screen for visual output like videos and games to completely re-designing the bathroom to respond to input created by the child's hands and body.

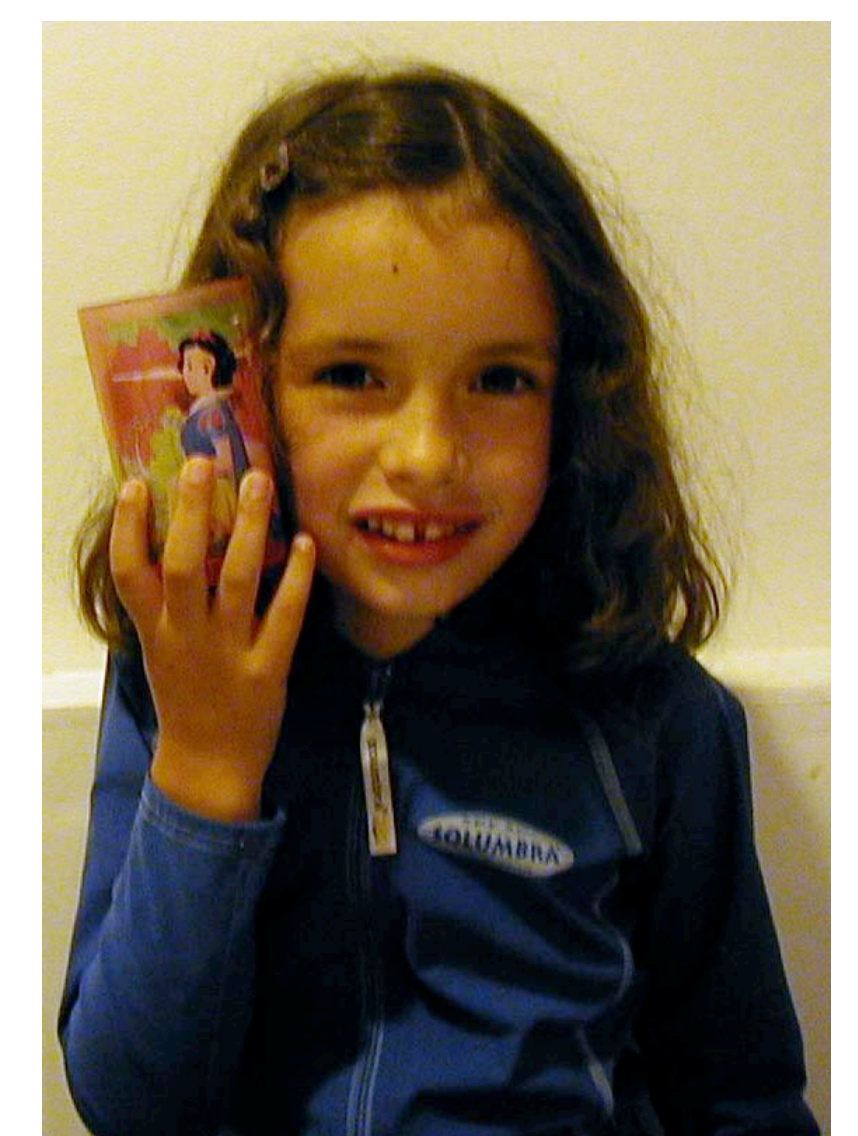
We wanted to **keep it simple** for two main reasons:

- * An overly complex system with too many parts is **daunting to the parent** since it requires a lot of work to setup and maintain.
- * Too much output can **distract the child** from the task at hand.

We have re-designed two existing artifacts, a drinking cup and a training potty.

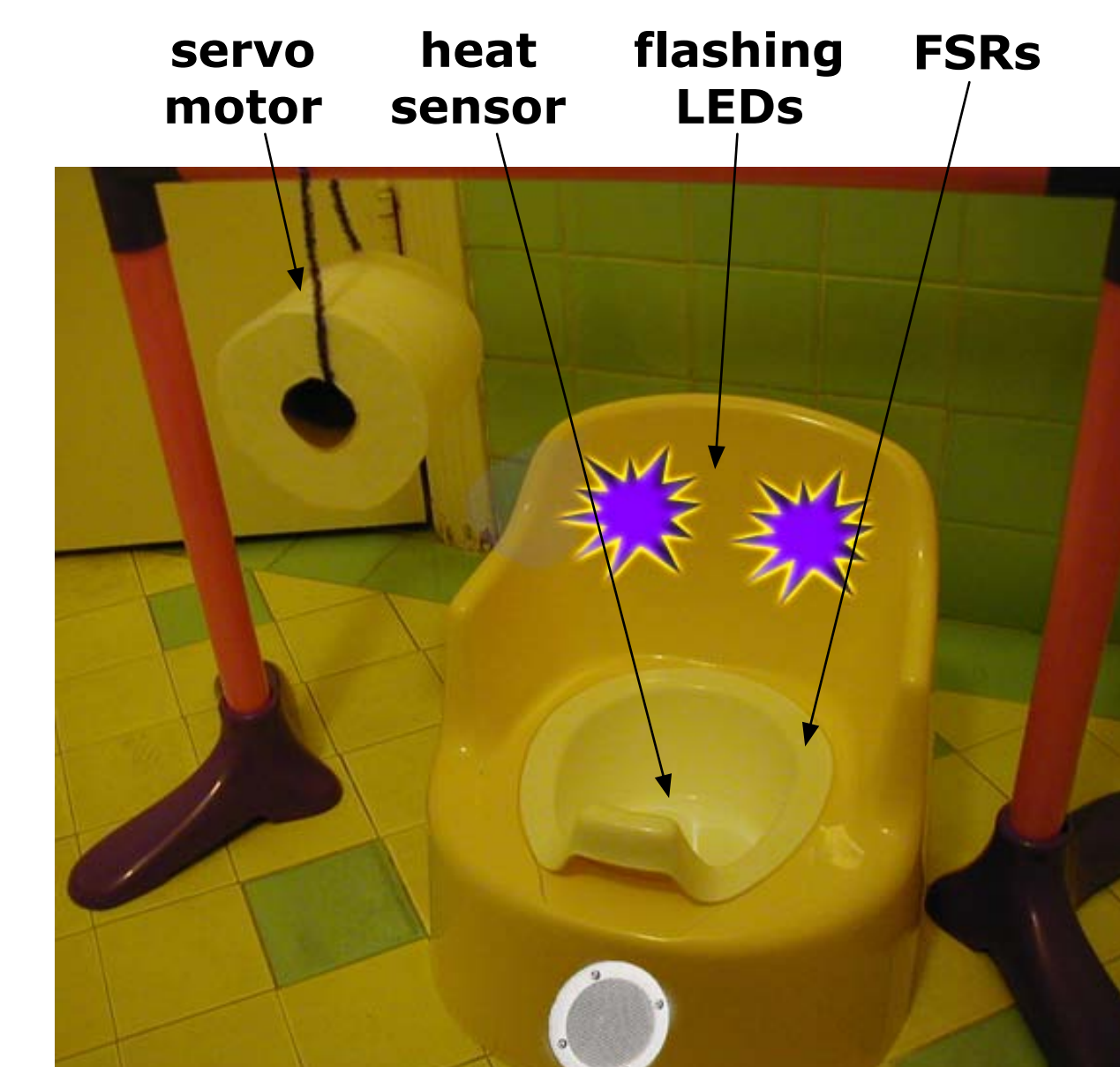
Drinking Cup

To help with the current disconnect between associating the feeling of having to go with actually using the toilet we will target the point of consumption by implementing a drinking cup with force sensors. The inherent quality of the connection between the child drinking with the cup and having to use the training potty lends itself to the evolution of the toilet-training process. It helps link the cause, drinking a lot of liquid, with the effect, having to go to the bathroom.



Training Potty

To help in the space itself (the bathroom) we re-designed a training potty which aids the child during and after use. It responds to the pressure of the child's weight on top of it and to the heat (or force if technically necessary) of the child's urine or bowel movement. The child's interaction with the system evolves over time as s/he moves from only using diapers to always using the toilet.



Potty-training Tangible interface

Katherine Ahern, Aylin Selcukoglu, Anirban Sen
Theory and Practice of Tangible User Interfaces

Problem Space

Children between eighteen months and four years of age often have problems transitioning from using diapers to using the toilet. This difficulty is caused by parental pressure, fear of the toilet, and the disconnect between associating the feeling of having to relieve themselves with the action of actually going to the bathroom. For some children bribing/providing incentives is enough to coerce them, but, for others, this does not work as well.

Current Solutions

Several aids are available in the market today including:

- * Potty games online – Elmo's Potty Time
- * Potty time stories (books)
- * Potty "dolls" for boys and girls
- * Decorated/Fun pull-ups for boys and girls

But, two main problems exist with these current implementations:

They only target the problem at **one point in the process** rather than creating a **coherent system** for the entire potty-training process.

They do **not** provide reinforcement during the time when the child is actually **ON the potty and IN the space** (the bathroom).

Future Work

Create different versions such as Elmo, Princess, or Barney with customized audio and decorative cup and potty.

Provide parent with the capability of recording customizable message of encouragement and congratulations.

Extend ideas to other forms of persuasive technology to aid children in learning:

- * how to use utensils when eating
- * how to tell time
- * how to tie shoe laces

Usecase/Scenario

Tommy just turned three and started potty training. His mother is a graduate student with a lot to do who spends too much time entertaining him while he's on the potty. Her friend recommends Potty Party. Next time Tommy wants some juice she pours it into the drinking cup. After he grabs it he hears the cup say "Drink up so we can practice going potty!". He continues to play with his toys drinking periodically from the cup. After finishing all his juice, before putting down his cup, he hears the cup say "Now it's time to try and go potty!". Tommy then sits on top of the training potty which begins to tell him a story and periodically plays music and gives him tips about potty training. This gives his mom time to finish all of her work. After the story ends and Tommy has sat for a while he decides he doesn't have to go and gets up to go play. Later on that week, while his mom is in class, Tommy's grandmother gives him milk in the same cup. This time he does go to the bathroom on the potty. He then hears bells and excited congratulations. At this point his mom receives a text message informing her of the achievement. When he rises off the potty, colored lights on the potty start flashing and toilet paper unwinds as Tommy hears a reminder to wipe his bottom and wash his hands. He does so and then goes off to play.