User Group

Children
Team

Amisha Banker
Bombay
Applied Arts

Muthukumar
Chennai
Bachelor of Architecture

Pranav Mistry
Ahemadabad
Bachelor of Engineering – Computer Science
Design Process

Initial understanding of the project brief
User selection
Study, analysis & inference from users
Redefining project brief
Design goals
Preliminary concepts
Final concept
Product evaluation
User feedback
Product interaction design
Who are children?

Under 16?
Over 2?
Teen, pre-teens, children, toddlers, infants

Cognitive classification – Piaget
Sensory-motor stage (Birth – 2 years)
Pre-operational stage (2 – 7 years)
Concrete-operational stage (7 – 12 years)
Formal-operational stage (12 -15)
Why children?

Designing products for children is fun & difficult

They posses an unpolluted ready to learn mind

No specific communication device for children is available

Children are the future

.....
Children

Brainstorming
A child's world
Child related concerns

- Activities
- Emotions
- Day cycle
- Relations
- Capabilities

Children
Activities

Fun
Play
Learn
Harass
Play pranks
...

Children
Relations

Parents
Friends
Teachers
Role models
 Relatives
...

CHILD
RELATIONS

Activities
Emotions
Day Cycle
Capabilities
Capabilities

Ready to learn new things
Regional language
No mindset
Find use for things
...
Day cycle

Home
School
Journey
Playground
Home work
Cartoons
TV
Toys
Eat
Sleep
...

CHILD

ACTIVITIES
MOTIONS
RELATIONS
CAPABILITIES
DAY CYCLE
Emotions

Frankness
Love
Playful
Show-off
Copycat
...
Children

User Study
Interaction with the user

Questionnaire – touching various aspects with child at the center.

Practical testing of their interface navigation skills.

Interaction with the children under different environments and in different situations.

Exploration of their technological awareness.
Interaction with the user

Study of wish list created by them

Users as designers

We went to

- Kendriya Vidyalaya - IIT, Mumbai
- New Era School, Mumbai
- Jal Vayu Vihar - Hiranandani
- Sonawala Building - Tardeo
Inferences from user study

Children are well aware of new technology.

They are curious about using new products.

After school hours, interaction happens with friends / neighbors / relatives.

They can find use of anything that is given to them.

Interaction happens at different levels at different intensities.

An urge to SHARE their experience is an inherent quality.
Emerging product brief

A fun device to break from the monotony of life.
A device which would help them to make new friends.
A device that brings out creativity among children.
Something to give them a feeling of “a device that is specially meant for them”
A device that would help children to share and learn.
Primary goal being education and entertainment.
The device should be unbreakable [child proof :)]
What do Indian children culturally inherit?

Tangible
Toys, story books, epics (Mahabharata, Ramayana), fables (Panchatantra), photographs, gifts, compass box, games, own drawings or doodles, stationery (pencils, crayons, erasers),

Intangible
Stories, lullabies, festivals, customs, celebrations, traditional acquired skills (carpentry, pottery), prayers, riddles, puzzles
Inspirations

Marbles
Pet
Kite
Slate
Media & Literature study


Interaction design and human factors support in the development of a personal communicator for Children - Ron Oosterholt, Mieko Kusano, Govert de Vries Philips Corporate Design

One Shot Trust Game Experiment

Trust In Children - William T. Harbaugh, Kate Krause, Steven G. Liday Jr., Lise Vesterlund

Touch me, Hit me and I know How you feel: A design approach to emotionally rich interaction - Stephan Wensveen, Kees Overbeeke, Tom Djajadiningrat

Kid Pad - A collaborative story-authoring tool for children HCI Lab, University of Maryland

Children, Monkey King & Chinese language: An experiment
Environment – zones

When we were children

What it is today

What they want
Cognitive development by Piaget
Trust & Relations

Sharing ≈ Trust

Ego Centric Possessive

My - I

My Daddy...
My Grandma...
I went...
I have more

Sharable Things

Sharing

Trust
Children

Early Concepts
Early concepts & Marbo

Kito
- Physical meeting
- Skill
- Strategy
- Effort
- Fun

Jelly boy
- Companion
- Sharing feelings
- Link between child and parents
- No physical communication
- User group limited

Living Memory
- Learning
- Trust
- Share
- Scribbling
- No physical communication
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NAVNIRMITI
To all the kids
Thank you very much

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