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Tantra-Mitra (तंत्रमित्र)

A Tutorial Sharing Platform for Smartphone Users

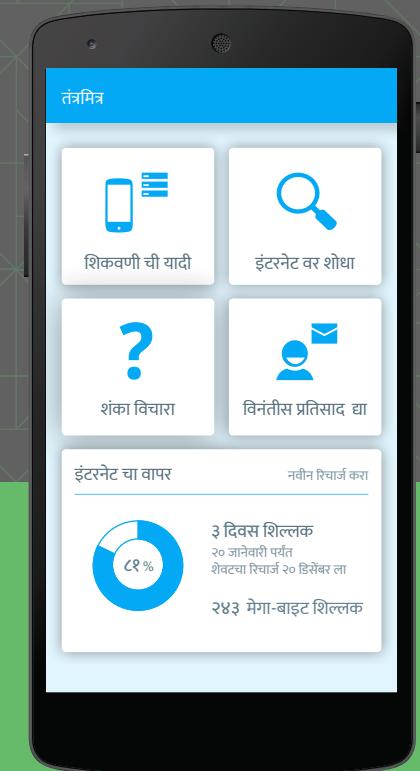
M.Des Project 2

Guide: Prof. Girish Dalvi

Tenure: 3 Months | Sept 2014 - Nov 2014



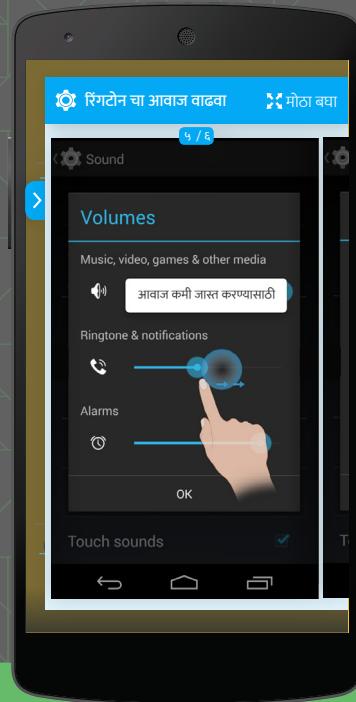
तंत्रमित्र is a tutorial sharing platform for novice smartphone users, instructors and application makers. The project was aimed to solve the learning challenges faced by middle-aged users who are less proficient in English.



Tutorials are saved in JSON format which makes them light-weight and easy to transfer

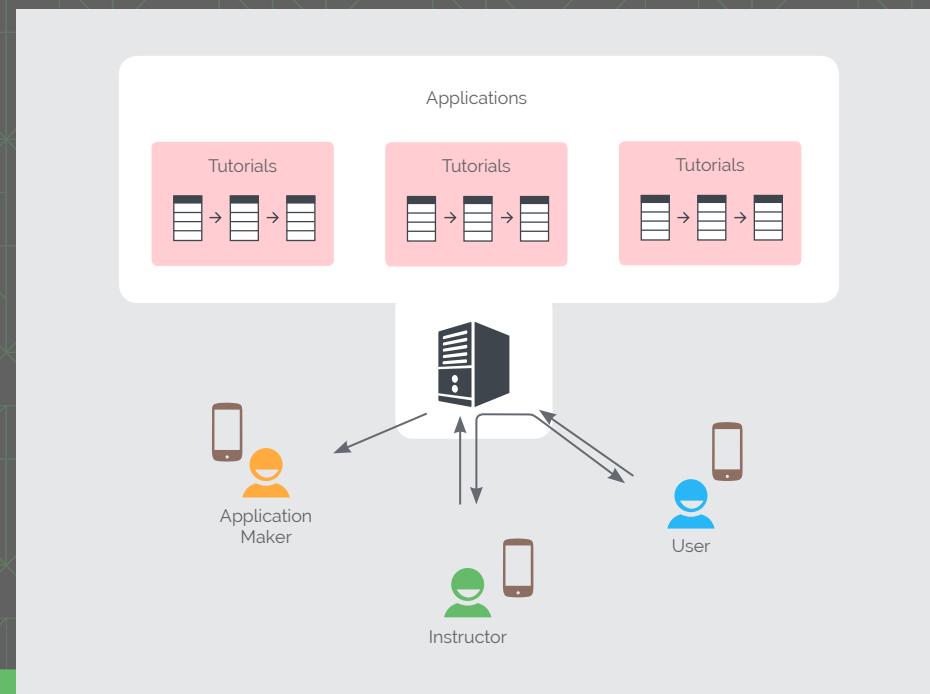
```
1 {
2   "tutorial": {
3     "id": "1",
4     "step": [
5       {
6         "size": "1",
7         "title": "open WhatsApp Application",
8         "img": "1.jpg",
9         "gesture": {
10           "type": "tap",
11           "left": "43.33%",
12           "top": "82.34%"
13         },
14         "texttip": {
15           "placement": "bottom",
16           "content": "हे अंक क्लिक करावा, थेबदून अप्लीकेशन बोरी करावा उपरांत."
17           "left": "64.04%",
18           "top": "64.04%"
19         },
20         "voicetip": "1.wav"
21       }
22     ]
23   }
24 }
```

Instructor can recommend tutorials to novice users



Unique tutorial format optimised for smartphones

तंत्रमित्र uses a light-weight tutorial format that provides localized multi-channel learning experience to users. Each tutorial is made from set of screenshots, navigable in sequential manner. Each step can be augmented with gesture animations, voice-tips and text-tips. Ability to navigate back and forth allows users to learn at their own pace.



Online Tutorial Hub

Online tutorial hub hosts tutorials uploaded by application makers for their application. Users can download these online tutorials. Instructors can recommend tutorials to novice users. Instructor can also download tutorial and localize it to match user needs.

Design Process



Secondary Research



Primary Research



Analysis



Restating Design Brief



Ideation



Evaluation

Secondary Research

Secondary research involved studying existing literature* for understanding factors that affect smartphone adoption. Additionally, it included review of existing solutions like user manuals, video tutorials and help applications. It helped in recognizing factors

*Literature survey involved studying Technology Adoption Model (TAM), Dreyfus model of skill acquisition, Unified Theory of Acceptance and Use of Technology (UTAUT) and User-Usage Model.



Some of the reviewed learning mechanisms

Interview Questionnaire

Phase 1 Questionnaire		Date:
Demographics		
Name	Gender	<input type="checkbox"/> M <input checked="" type="checkbox"/> F
Education	Age	
Occupation	Family Yearly Income	
Family Members		
Literacy		
Language	Competency	<input type="checkbox"/> Speak <input type="checkbox"/> Read <input type="checkbox"/> Write
Education	Usage Context	
Language		
English	Competency	<input type="checkbox"/> Speak <input type="checkbox"/> Read <input type="checkbox"/> Write
Education	Usage Context	
At Home		
Desktop PC	Used For	
Laptop	Used For	
Tablet	Used For	
Exposure to Digital Devices		
Digital Camera	Used For	
Music/DVD Player	Used For	



Affinity Mapping



Primary Research

Primary research involved 19 semi-structured interviews conducted using **contextual inquiry**. A questionnaire was designed for guiding interviews and collecting quantitative and qualitative data about smartphone adoption. The collected data was analysed using **affinity mapping**.

Umbartha - The Thresholds Project

Covering Bombay Housing Societies Group

Sponsor: HermanMiller

Guide: Prof. Ravi Poovaiah, Prof. Ajanta Sen

Tenure: 3 Weeks | Oct 2013

Course: Interaction, Media & Senses

The project was aimed to study the threshold spaces in Bombay Apartments. The outcome of the project was two concepts, "Connectrance" & "Interactive Elevator", designed to enable better social engagement in threshold spaces. The solutions were evaluated with users using low fidelity prototypes.



Visited Apartments in Mumbai



Spacial Map of Threshold Spaces



Background Study

We visited different types of housing apartments across all parts of Mumbai and interviewed people to understand different types of threshold spaces and their functionalities.

While working on this project we learnt and applied state-of-the-art design research methods and presentation techniques.



Connectrance - Concept 1

Enables a better controlled engagement between insiders & outsiders.

- Features
- One way vision: inside to outside
 - Controllable transparency
 - Single handle for main and safety door
 - Two way asynchronous communication



Interactive Elevator - Concept 2

Designed to encourage face to face interaction among people.

- Features
- Centrally located control panel
 - Interactive display on control panel
 - Off-centric door: draws less attention
 - Interactive games to encourage interaction

Train Tackle

A Game to learn Mumbai Local Train Map

Guide: Prof. Uday Athavankar, Prof. Girish Dalvi

Tenure: 3 Weeks | Jan 2014



Exhibited at "9th Golden Eggs All Star Design Showcase 2014" held at Axis Gallery, Tokyo.

Train Tackle is a fun way to learn about trains and the railway map of your city, without explicitly having to memorize. Even without any knowledge of the map, players can still play with no disadvantage. Train Tackle is a multiplayer game with a beginner and an advanced level.



Testing with Children



Cards of local train stations

Design Process

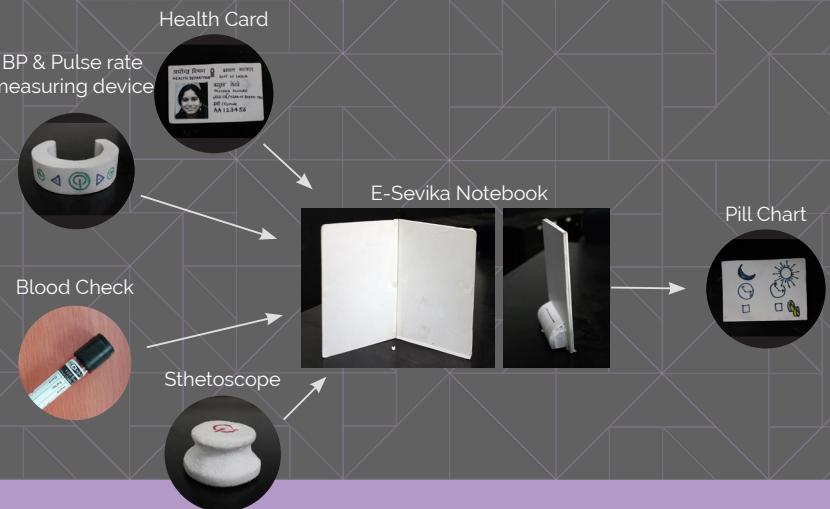


E-Sevika

A futuristic digital notebook to assist Aasha workers

Guide: Sudhir Bhatia, bRnd Studios

Tenure: 3 Weeks | April 2014



E-Sevika is a futuristic digital notebook to assist Aasha workers for improving accessibility of healthcare system in Indian rural areas in terms of distance, time and money.

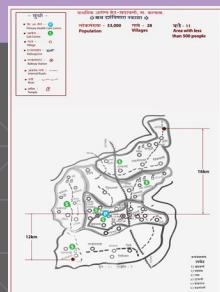
Mobile Computing Timeline - 30ft x 5ft



Background Study

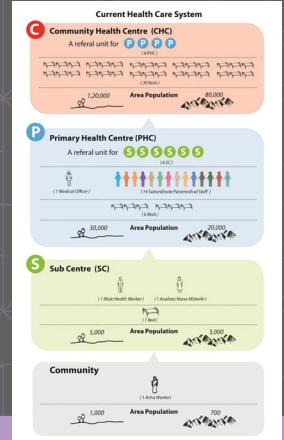
We studied mobile computing timeline to understand evolution of mobile phones and communication technologies. It helped us in predicting future technology trends and making informed assumptions while designing solutions.

In Primary research, we visited Primary Healthcare Centre at Khadavali and conducted semi-structured interviews of doctors and patients to understand their problems related accessibility.



Primary Research | Visit to Primary HealthCare Centre, Khadavali, Thane

Indian Healthcare System

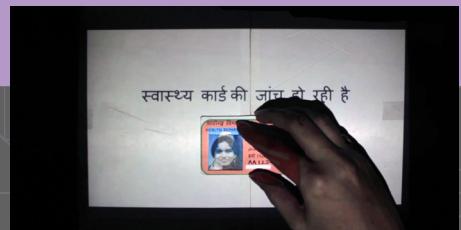


Proposed Ecosystem for E-Sevika



Ideation and Prototyping

The final concept, selected after ideation, was prototyped using rapid video prototyping. The video showcases an interaction sketch of E-Sevika and its users.



Stills from the E-Sevika's Interaction Sketch Video

Thank You

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