# **Group Interaction on Interactive Multi-touch Tables** by Children in India

# INTRODUCTION

- 1. Multi-touch tabletops in a local school in Delhi, India
- **2.** Observational study:
  - Collaboration strategies
  - Touch input technique





## **GROUP ACTIONS**



- 1. Simultaneously move an object
- 2. No appearance of conflict
- **3.** Demonstrate understanding to each other



- 1. 'Crowded conditions' several activities happening
- 2. Cohesiveness and engagement
- **3.** Awareness of each others' actions

### IMPLICATION: GROUP ACTION

- **1.** Performance attitude is valuable in group tasks
- **2.** Natural group behaviour and shared understanding is seen
- **3.** Allow children to work anywhere on surface without restrictions

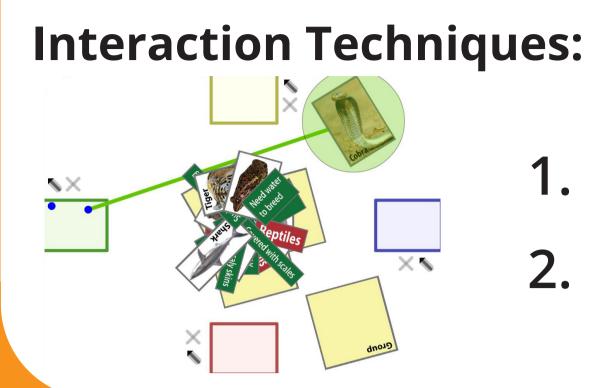




# TASKS & TECHNIQUES

### **Collaborative Learning Tasks:**

- 1. Spider diagram
- 2. Classification



# MULTI-FINGER TOUCH TECHNIQUE



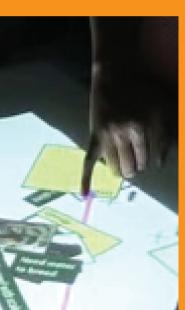
- **1.** Beyond the typical thumb-index finger combination
- 2. Fingers used: thumb, middle and little fingers
- **3.** Expressing themselves & drawing attention

### IMPLICATION: MULTI-FINGER

- 1. Children applied touch input that seemed natural to them
- **2.** Important to understand the existing 'natural' techniques of users
- **3.** Design interaction techniques that support the 'organic' flow of digital object interaction

Izdihar Jamil, Mark Perry, Kenton O'Hara, Abhijit Karnik, Mark T. Marshall, Swathi Jha, Sanjay Gupta, Sriram Subramanian

- 1. Direct touch
- 2. Pantograph



- Actions seen:
- Move digital objects
- Draw lines
- Using both techniques

### **MORE INFO** Izdihar.Jamil@bris.ac.uk big.cs.bris.ac.uk I'm also looking for Post-Doc positions! Microsoft<sup>\*</sup> Research