PaperButtons: Expanding a Tangible User Interface. Pedersen, et al. DIS. 2000.

What are the core research questions addressed by the work?
- How to create and expand tangible interfaces?

What motivates the work?
- Builds on two existing trends in HCI: tangible interaction, paper interfaces
- Providing more features to the existing 'Palette' presentation without rendering the existing system too complex

How does the work understand the usage, capabilities, and limitations of paper?
- Capabilities of paper: intuitive and low-cognition interaction, cheap, disposable
- Limitations of paper: unable to engage interactively with media

What is the target application domain of the work?
- Presentation delivery using a tangible interface

What are some proposed extensions to paper proposed by the work?
- Support gradual build of a slide as a kind of manual interaction
- Control video and audio snippets within the slide
- Added new operations:
    - A button that is printed on or affixed when printing the card content

What design constraints or objectives guided the work's implementation of the proposed extensions?
- Button should be small and thin enough to allow cards to be stacked, shuffled, augmented, etc
- Buttons should be cheap, disposable, like paper
- Functions of buttons should not degrade over the lifetime of paper
- The processing of associating buttons with electronic content should be integrated in the production of content
- Process of attaching buttons to paper should be made extremely easy
- Layout of buttons on cards should be customizable
- Intuitive operation supported by user-button interface
- Robust operation provided
- Buttons must provide appropriate tactile guidance
- Clear sensible feedback of pushing buttons is needed

How are the proposed extensions implemented?
- Custom "buttons"
    - Components of the button sender is split between card and hand/wrist of the operator: Emitter and power supply placed on wristband on user's hand, encoder and switch influences look and feel of card

What findings have been obtained from either the implementation process or an evaluation of the proposed system?
- Concept of paper as input
- Limitation: Creation of new cards is more complex – buttons cannot be printed like barcodes – and wristband apparatus is bulkier & 'technologically entangling'