From Table to Tablet and Back Again: The Evolution of the Designer’s Toolset

Micah Dickerson
Product Manager - Autodesk
Hi. I’m Micah.
“Use a machine or a tool in accord with its strengths and limitations, and it will do a good job for you.”

Jef Raskin - *The Humane Interface*
“Over the course of the 20th century, the button transformed technology after technology.”

“And then, with the iPhone, everything changed...we didn’t need to rely on just buttons anymore; we could tap, drag and pinch to operate the phone.”
**Sharp JX-450 Color Scanner**

The JX-450 scans color images to provide a palette of more than 260,000 different tones and can digitize 256 grey levels in black and white, both in up to 300 dots per inch. This scanner is compact, yet is capable of scanning images up to 11 5/8" x 17" and is highly flexible for artistic control of the scanned image.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part#</th>
<th>List</th>
<th>CDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>JX-450 Color Scanner</td>
<td>SC 90724</td>
<td>$6995</td>
<td>$5749</td>
</tr>
<tr>
<td>Mac II,IIx,IIcx Interface Kit</td>
<td>SC 47711</td>
<td>585</td>
<td>549</td>
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</tbody>
</table>
Review - Character, D2PD, CTQ
Process flow - detailed
Six Sigma level (Casual) graphical tool
Fishbone diagram (high level process diagram)
Conceptual Design

Detailed Design

Analysis

Documentation

Visualization

Programming

Demolition

Operation and Maintenance

Construction Logistics

Construction 4D/5D

Fabrication

Renovation
The Future
Case Study 1:

3Dconnexion
Greg Sobczyk
3Dconnexion products
Greg Sobczyk
What is a 3D mouse?

- A 3D mouse is used together with a traditional mouse engaging both hands into a balanced and cooperative work style.
  - One hand engages the 3D mouse to position the model.
  - The other hand uses the traditional mouse to edit the model or select menu items.
- It’s a more efficient and comfortable way to work.
## Product line

<table>
<thead>
<tr>
<th>Product Line</th>
<th>SpacePilot® Pro</th>
<th>SpaceMouse® Pro</th>
<th>SpaceMouse® Wireless</th>
<th>SpaceNavigator® for Notebooks</th>
<th>SpaceNavigator®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$399</td>
<td>$299</td>
<td>$129</td>
<td>$99</td>
<td>$99</td>
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</tbody>
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### NAVIGATION
- **3Dconnexion 6DoF Technology**: •
- **Compact Controller Cap**: •
- **QuickView Keys**: 10 keys (32 Views), 4 keys (12 Views)
- **Navigation Settings Keys**: Speed, Rotation, Pan/Zoom, Dominant, Rotation

### PERFORMANCE
- **Intelligent Function Keys**: 10, 4
- **Total Programmable Keys**: 31, 15, 2, 2, 2
- **Visual Support**: Full Color LCD, On-Screen-Display
- **Radial Menu**: •, •, •, •, •

### COMFORT
- **Advanced Hand Rest**: •
- **Keyboard Modifiers (Ctrl, Alt, Shift, Esc)**: •
- **3Dconnexion Wireless Technology**: •
- **Warranty**: 3 years, 3 years, 2 years, 2 years, 2 years
# Key Benefits for End User

<table>
<thead>
<tr>
<th></th>
<th>Productivity</th>
<th>Design</th>
<th>Comfort</th>
<th>Easy to use</th>
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<tbody>
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<td>Increased productivity, most within</td>
<td>Improved error detection</td>
<td>Reduced physical fatigue or</td>
<td>Comfortable using a 3D mouse</td>
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<td></td>
<td>the first week</td>
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<td>discomfort</td>
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<tr>
<td></td>
<td></td>
<td>quality</td>
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- Increased productivity, most within the first week: 86%
- Average productivity increases: 21%
- Improved error detection: 84%
- Improved overall design quality: 85%
- Reduced physical fatigue or discomfort: 72%
- Comfortable using a 3D mouse within 2 days: 80%
- Proficient within first week: 66%
Case Study 2:

Kinect & Leap Motion

Kean Walmsley
Case Study 3:
Haptix
Kickstarter Campaign or Ractiv Website
Case Study 4: Panasonic Large-Format Tablet
Mayte Zavaleta
In Summary…

- We’ve come a long way since the days of cave drawings and the Universal Drafting Machine.
- Technology has advanced to the point where we can re-think the way we interact with it.
- There are some cool things in the works – and some are already commercially available.
Questions?