SuperPaint

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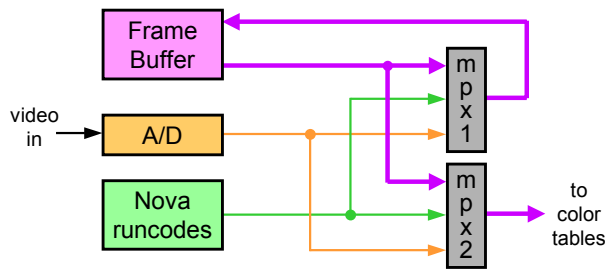
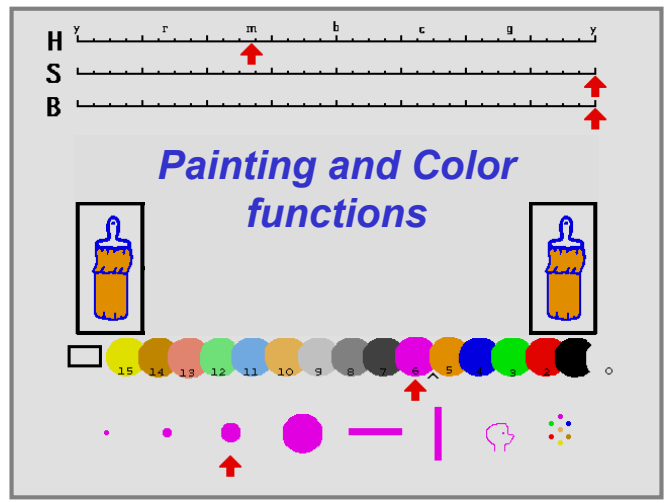
"We have to do it while it still seems crazy."
-- Pierre St. Hilaire

SuperPaint Hardware

- One full video frame
  - 640 x 486 pixels, 8 bits/pixel
  - 2Kbit shift registers (Intel 2401), recirculating
  - 83 ns pixel clock (square pixels)
- Two color tables, each 256 x 3 x 8 SRAM + 3 D/As
- Full NTSC video compatibility
  - Genlockable, NTSC encoder output
  - Real-time continuous (monochrome) video input (8 bits)
- Nova 800 controller, X runcoded write and read
- Color replace, X area fill, etc.

Data Paths





File functions

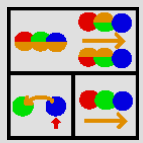
Load
Load w colors
Save
Save print

Image functions

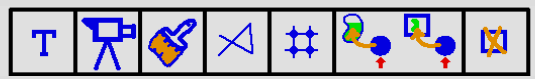
Scale Up 2x
Scale Dn 2x
Move
Copy

Animation functions

Swap Palette
Step Colors
Reveal Colors
Cycle Colors
Copy Color



Miscellaneous



Insert Text
Video Input
Create Brush
Draw Lines

Set Gridding
Fill Color
Replace Color
Erase

Inspirations

- Alto bitmap display - Thacker et al, Xerox PARC, Feb 1973
- Char Gen Paint - Kay & Purcell, Xerox PARC, 1972
- Frame Buffer (shift registers) - Ramtek Corp, 1972
- Paint program - Noll & Miller, Bell Labs, 1969
- Tri-Color Cartograph - Kubitz & Poppelbaum, Univ of Illinois, 1968
- Real-time video animation - Harrison & Honey, Computer Image Corp, 1967
- ... etc.

