Atari ST knowhow

Workshop 1:
History and Introduction

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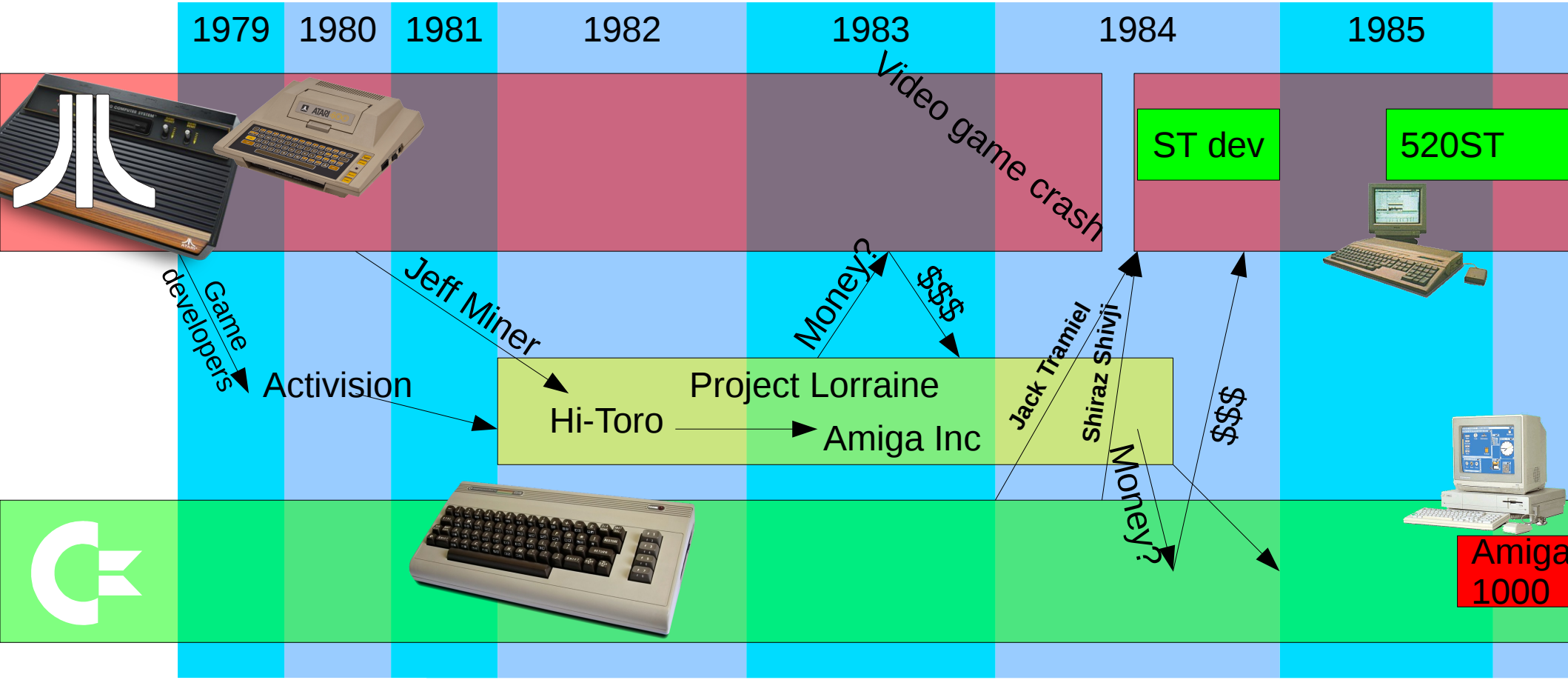
History

It's complicated



Specifications

First ST specifications

- Motorola 68000 CPU @ 8Mhz
- 512K RAM
- External single sided floppy 360K
- Separate B/W and Color modes
- Basic audio chip, additional MIDI ports
- Printer, serial and harddisk connectors

Video

2 worlds: B&W and Color

B&W 70Hz, professionally aimed

640x400 pixels

Macintosh had 512x342

=> “Jackintosh”

Dedicated monitor, only from Atari. Very good quality.

Video

Color was for games. Need different monitor

Palette based, 512 possible colors to choose from

Low resolution:
320x200 16 colors
Medium resolution
640x200 4 colors

50Hz (USA: 60Hz)

Look it up on wikipedia!

Audio

- Built in soundchip: YM2149

  What a downfall from C64 or XL!

  - 3 channels, square wave, independent volume
  - one ADSR envelope with repeat
  - noise generator

- But the ST also had MIDI (great success among musicians)

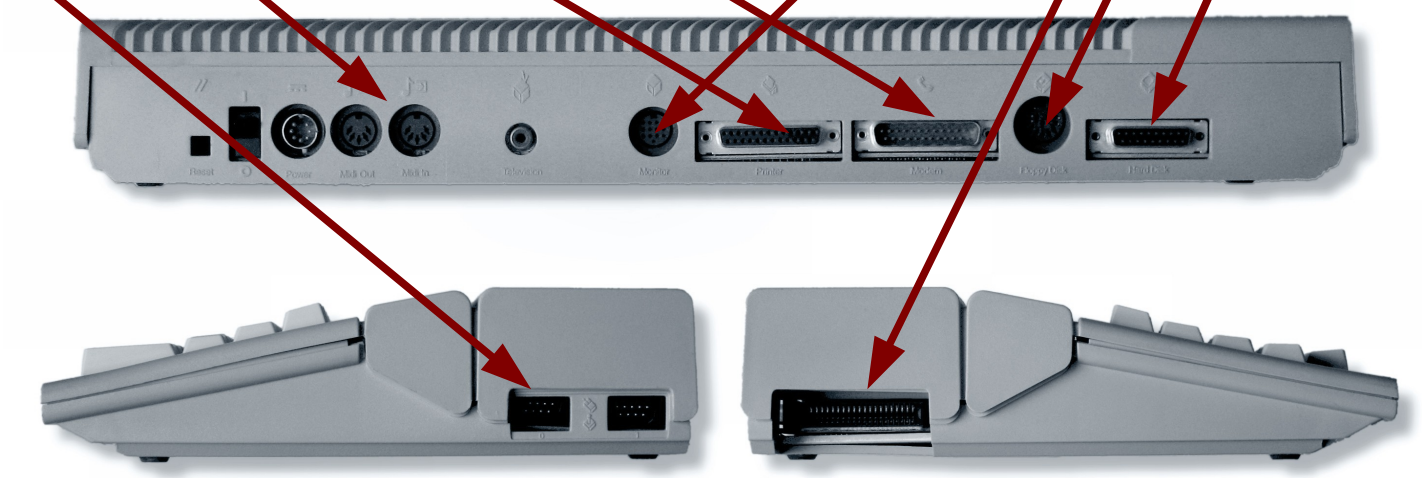
Connectivity

Standard ports

- Serial
- Printer
- MIDI
- Joystick & Mouse

Proprietary Ports

- Monitor
- Rom port
- Floppy
- ACSI (harddisk)



Look it up on wikipedia!

Variations

- RAM: rounded gives model number

  512K => 520ST / 1024K => 1040ST

- Superscript add ons indicate model:

  M: RF modulator

  Example: 1040ST^{FM}

  F: built-in floppy

  E: enhanced (M + F + 4096colors, digisound, hardware scrolling, additional joystick ports)

Variations

- Mega: desktop with separate keyboard
  model number indicates quantity of MB ram

- TT030 using pure 32bit 68030 CPU

- Falcon030 with DSP and advanced
  grafics modes

Look it up on wikipedia!

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OS

- TOS: CP/M based with DOS hierarchical filesystem
- User interface: GEM
  - VDI (drawing primitives)
  - AES (UI elements)
- Operating system: GEMDOS
  - BIOS
  - XBIOS

Software

- Aimed to B&W market
  - First Word (included)
  - Calamus (DTP)
  - Signum (think LaTeX wysiwyg)
  - Cubase (MIDI sequencer)
- Aimed to Color market
  - NEOchrome, Degas, Spectrum512 (paint programs)
  - Tracker, Quartet (4 voice digi music)
  - soundsampler

Software

- Initial supply
  - ST basic (horrible)
  - ST Logo (more horrible)
- Independent
  - GfA Basic (the reference)
  - Devpac
  - Turboass
  - Pascal
  - Turbo C

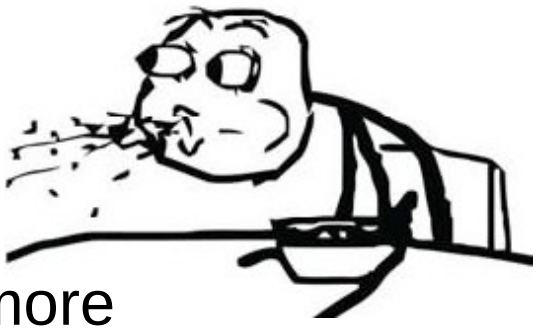
Software

- Games
  - Mostly only for color
  - Dungeon Master (3D RPG)
  - Falcon (Flight sim)
  - MIDI maze (first ever LAN game)
  - Platform games (Lemmings, Barbarian)
  - Shooters (Xenon2, Wings of Death)

Demos

- Games had cracks, later came demos
- We can do what Amiga does! But we use a menu (huh?)

  (this section could last several hours, if you want)
- 1987: READ_ME.PRG, LSD, LCD
- 1988: B.I.G, Fullscreen, FNIL, Amiga
- 1989: NY1, Union, Cuddly, Whattaheck, Sowatt
- 1990: NY2, Mindbomb, Overscan, LifesBitch, Syntax Terror, Spoon
- 1991: Electra, European, Decade, Scorcher, PYM
- 1992: O-Demo, Phaleon, Bollocks, Socks, Ventura
- 1993: Froggies, Synergy, Flip-O
- Newer stuff: Nostalgic-O, Virtual Escape and many more



Hands on

- Start your ST: put button to ON
- Stop your ST: put button to OFF

- Emulators: there is really no shutdown. You just close it.

- On ST only bootsector virus was an issue

Where to get software

- Demos: www.pouet.net

  or pacidemo.planet-d.net

Games: http://ahladnik.free.fr/ http://dbug.kicks-ass.net/dbug/

Applications: http://www.emuparadise.me/Atari_ST_ROMs/63

ask me!

Syn2cat projects

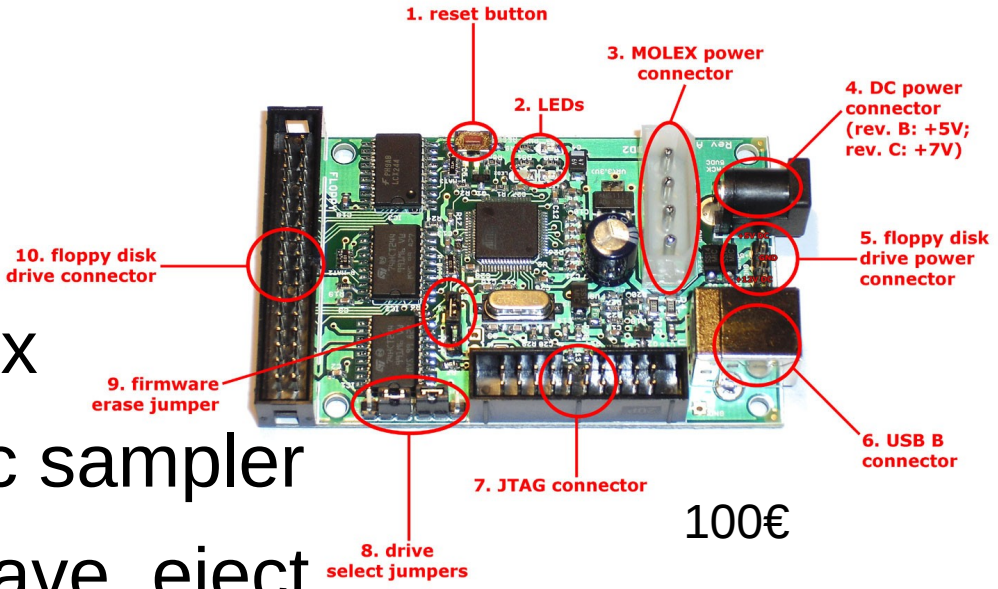
- Computer Museum

  plan is to buy shelves, one shelve per system

  put them into the hallway, accessible front/back

  with nice decoration

- Floppy archiving robot
  - Maybe using the KryoFlux
  - Shugart to USB magnetic sampler
  - Take pic of disk, insert, save, eject



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Next Workshops

This is not finalized

2. Hacking hardware & software
3. Putting it all together
4. Assembler and Hardware
5. Algorithms and Optimizations
6. Sync programming
7. First own steps

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