Revisiting the Dynabook concept

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About me

- Educator in public school, Geneva, B.Math, Ma.Ed

- Computer scientist, Ma.CS, PhD.CS

- Free software enthusiast and user since 1998

- And of course, Smalltalk user since 2002

Contents

Cashier machine for education

- The Dynabook is still only a concept
- In school, dynamic numeric tool mostly not used
 $\Rightarrow$ observe the other sectors of the society

To get you involved

- Educator, professor
- Benefactor
- Student at university
- Econimist
- Software developer
- Project manager
- Hardware specialist
- Designer
- System administrator
- ...

Dynamic model of knowledge
the learner can operate on

Dynamic model of the *Newton Telescop*

The learner can operate a different level of knowledge light beam, focus point (change the mirror curve)
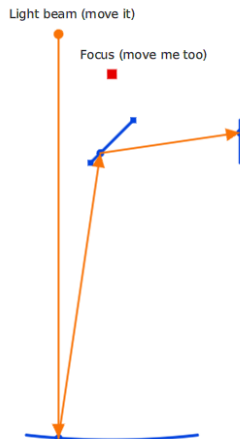
Teacher

What is a teacher?

- Yes, an educator. Manipulating, designing, sharing knowledge.
  $\Rightarrow$ Library of dynamic knowledge models, scriptable with a DSL and/or GUI (think Dr. Geo)
- ... but also a manager
  - managing student
  - managing assignment
  - managing grade
  - managing meeting
  - managing parents
  - ...

Any realistic Dynabook revisit should take theses aspects in consideration.

Kid

Can we reduce the bag wight?

I have seen lightweight students assigned with mountain of materials:

- >10 binders
- >10 books
- >10 activity files
- numerous notebooks

Any realistic Dynabook revisit should take theses aspects in consideration.

Software environment

What do we need?

- Free software from the basement (OS) to the attic (end user applications)
- Rapid prototyping
- A malleable environment to develop knowledge models with state of the art visual representation
- Easy to implement DSL to script knowledge models
- Portable to different hardware architecture

⇒ Cuis-Smalltalk to develop end user applications and knowledge models

Free Hardware

Design there

Manufacture anywhere

Economic

Large scale adoption in one place, also require local economic benefit on that place:

- Software support
- Assembling/Manufacturing
- Repairing
- Training

$\Rightarrow$ Free software & hardware as prerequisites

Is there any plan?

Roughly

Iterations

1. **Develop the Dynabook app** (me, but join!)
2. Test Dynabook app in school and iterate with the development (1 or 2 users)
3. Develop hardware prototype with existing hardware
4. Develop Dynabook operating system
5. Test Dynabook app in school and iterate with the development (tenth of users)
6. Test Dynabook in school and iterate on the hardware and software (1 or 2 users)
7. Test Dynabook hardware and software with one classroom (30 users, students and teachers)