Smalltalk - Historia

Smalltalk que usaremos

- CuisUniversity:
  - http://www.cuisuniversity.org/

- Basado en Cuis:
  - https://github.com/Cuis-Smalltalk/Cuis-Smalltalk-Dev

Historia

Dahl and Nygaard at the time of Simula's development
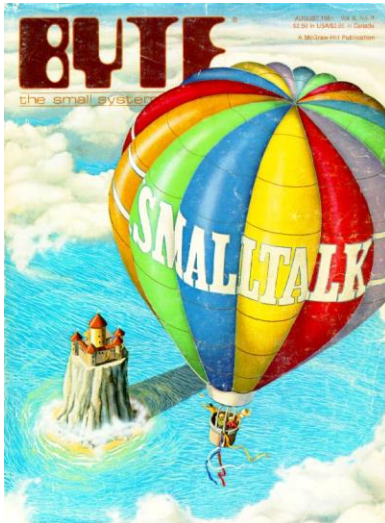
- ➢ Historia
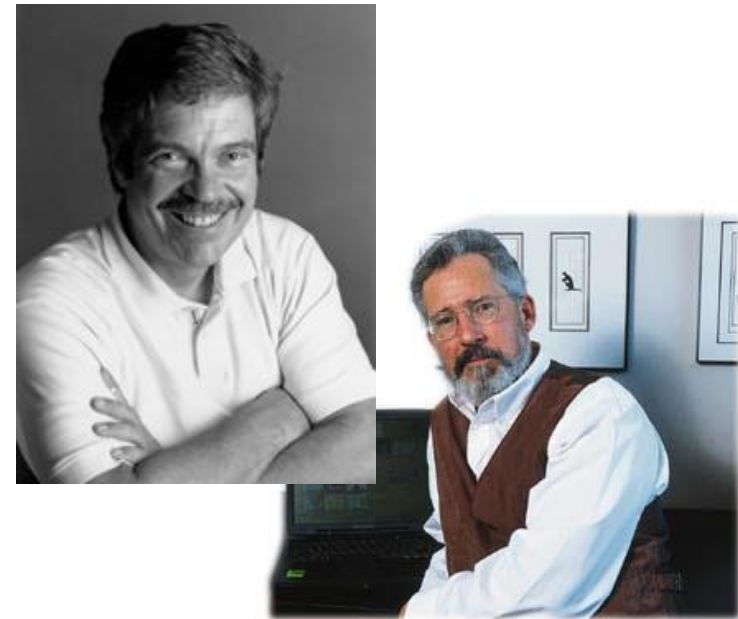 - ➢ Simula 67 (Nygrard y Dahl)
    - ➢ Previo al paradigma Estrucuturado
    - ➢ *Goto Considered Harmfull* – '68
    - ➢ Structured Programming – '71 (using Simula 67 as prog. lang.!!)
  - ➢ Smalltalk
    - ➢ Alan Kay
    - ➢ Dan Ingalls
    - ➢ Adele Goldberg

Smalltalk

DynaBook

Augment Children
Comprehension

Smalltalk
(72,74,76,78,80)

Simula 67

Lisp

Flex Machine

GUI - IDE

Object Oriented

VM

http://www.youtube.com/watch?v=AuXCc7WSczM
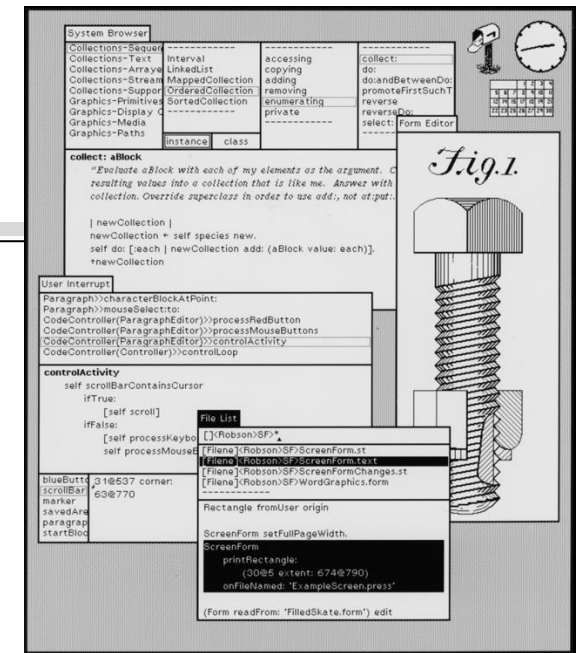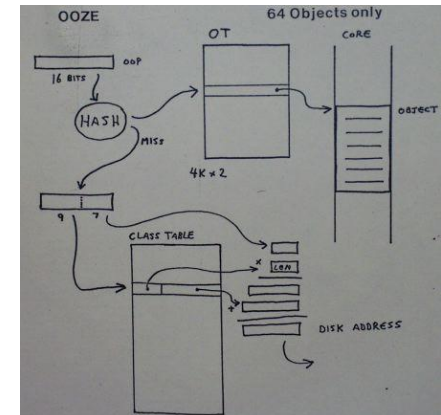
Libros

- Dealers of Lightning: Xerox PARC and the Dawn of the Computer Age
  https://www.amazon.com/Dealers-Lightning-Xerox-PARC-Computer/dp/0887309895

- The Dream Machine: J.C.R. Licklider and the Revolution That Made Computing Personal
  https://www.amazon.com/Dream-Machine-Licklider-Revolution-Computing/dp/0670899763

- The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution
  https://www.amazon.com/Innovators-Hackers-Geniuses-Created-Revolution/dp/1476708703

- History of Programming Languages II
  https://www.amazon.com/History-Programming-Languages-Thomas-Bergin/dp/0201895021

Papers y Revistas

- Byte Magazine, August 1981
  https://archive.org/details/byte-magazine-1981-08/mode/2up

- The Early History of Smalltalk – Alan Kay
  http://worrydream.com/EarlyHistoryOfSmalltalk/

- Design Principles Behind Smalltalk – Dan Ingalls
  https://www.cs.virginia.edu/~evans/cs655/readings/smalltalk.html

- Back to the Future: The story of Squeak
  https://www.vpri.org/pdf/tr1997001_backto.pdf

- The Evolution of Smalltalk from Smalltalk-72 through Squeak - Daniel Ingalls
  (por salir en la HOPL IV)

Videos

- The Dynabook/Past, Present and the Future
  - Parte 1: https://www.youtube.com/watch?v=7Rl4Zx3pg2Y
  - Parte 2: https://www.youtube.com/watch?v=TvHAcfFE9_k
- Yesterday's Computer of Tomorrow: The Xerox Alto |Smalltalk-76 Demo
  https://www.youtube.com/watch?v=NqKyHEJe9_w

Videos

- ## The Mother of all Demos
    - Parte 1: https://www.youtube.com/watch?v=yJDv-zdhzMY
    - Sitio de Douglas Engelbart: https://dougengelbart.org/

- ## Entrevista del CHM a Bob Taylor:
  https://www.youtube.com/watch?v=Y0MsrrTo8jY

Filosofía de Smalltalk

- Ambiente de Aprendizaje, de Investigación
- Basado en las ideas de Piaget (constructivismo) y Bruner
- Se prioriza la investigación propia, aprender descubriendo, viendo lo que hizo otro
- ¡Todo el Código Fuente disponible desde los '70!

Filosofía de Smalltalk

- Principios de diseño:
  - Feedback Inmediato
    - Bret Victor: Inventing on principle
      - » http://vimeo.com/36579366
  - Simple
  - Consistente
  - Mucha importancia a la interacción Hombre-Máquina

Instalación

Arquitectura

- ## VM:
    - Se levanta corriendo run.bat o run.sh según corresponda
    - Ver commando dentro de ese script para entender cómo funciona

- ## Imagen: (nnnn es la version)
    - CuisUniversity-nnnn.image

- ## Código Fuente:
    - CuisV6.sources
    - CuisUniversity-nnnn.changes

About Cuis

¡Bienvenidos a CuisUniversity!

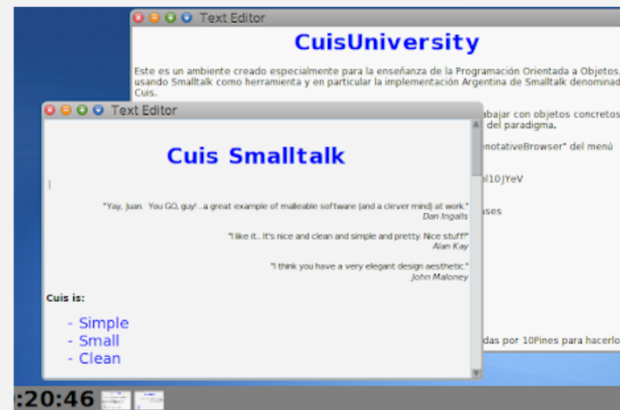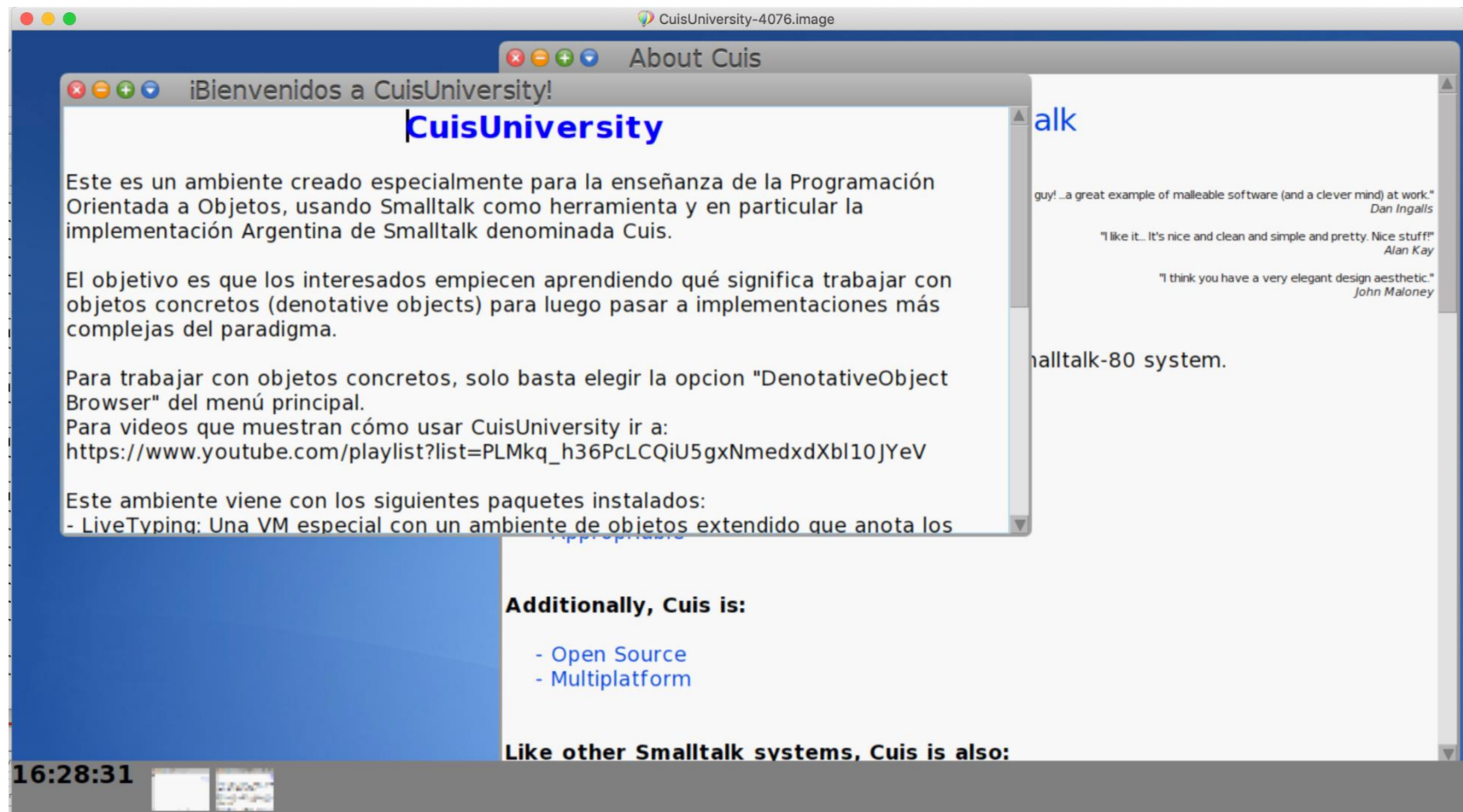# CuisUniversity

Este es un ambiente creado especialmente para la enseñanza de la Programación Orientada a Objetos, usando Smalltalk como herramienta y en particular la implementación Argentina de Smalltalk denominada Cuis.

El objetivo es que los interesados empiecen aprendiendo qué significa trabajar con objetos concretos (denotative objects) para luego pasar a implementaciones más complejas del paradigma.

Para trabajar con objetos concretos, solo basta elegir la opcion "DenotativeObject Browser" del menú principal.
Para videos que muestran cómo usar CuisUniversity ir a:
https://www.youtube.com/playlist?list=PLMkq_h36PcLCQiU5gxNmedxdXbl10JYeV

Este ambiente viene con los siguientes paquetes instalados:
- LiveTyping: Una VM especial con un ambiente de objetos extendido que anota los

guy! ...a great example of malleable software (and a clever mind) at work."
Dan Ingalls

"I like it... It's nice and clean and simple and pretty. Nice stuff!"
Alan Kay

"I think you have a very elegant design aesthetic."
John Maloney

alltalk-80 system.

Additionally, Cuis is:

- Open Source
- Multiplatform

Like other Smalltalk systems, Cuis is also:

16:28:31

Uso de Recursos

Activity Monitor (All Processes)

CPU | Memory | Energy | Disk | Network

Process Name	Memory	Threads	Ports	PID	User
Google Chrome Helper (Rend...	91,8 MB	19	247	487	hernan
Google Chrome Helper (Rend...	83,9 MB	16	180	559	hernan
Google Chrome Helper (Rend...	81,1 MB	19	367	2794	hernan
Google Chrome Helper (Rend...	79,5 MB	18	201	21644	hernan
Google Chrome Helper (Rend...	76,8 MB	15	236	455	hernan
Atom Helper	75,4 MB	9	146	22411	hernan
Spotify Helper (GPU)	75,3 MB	8	154	46767	hernan
Squeak 5.0	74,3 MB	5	299	27717	hernan
Google Chrome Helper (Rend...	71,4 MB	19	173	565	hernan

Process Name	Memory	Threads	Ports	PID	User
Google Chrome	1,33 GB	34	1.351	393	hernan
Google Chrome Helper (GPU)	966,6 MB	13	674	438	hernan
kernel_task	808,1 MB	176	0	0	root
Google Chrome Helper (Rend...	538,6 MB	24	532	478	hernan
WindowServer	510,4 MB	10	2.586	255	_windowserver
Eclipse	482,8 MB	63	395	28095	hernan

Process Name	Memory	Threads	Ports	PID	User
Google Chrome	1,34 GB	35	1.359	393	hernan
Google Chrome Helper (GPU)	964,2 MB	13	673	438	hernan
kernel_task	886,1 MB	176	0	0	root
IntelliJ IDEA	747,1 MB	60	361	28307	hernan
Google Chrome Helper (Rend...	535,6 MB	21	523	478	hernan
WindowServer	484,7 MB	11	2.611	255	_windowserver

Características

- Smalltalk = Lenguaje de Objetos + IDE
- Dinámicamente tipado
- Meta-circular

- En particular CuisUniversity es LivelyTyped