

Project 9 Midterm Report



USIMAGTool: UltraSound IMAGIng Software

*UsimagTool: A Software for Real-time
Elastography and Tensorial Elastography*



Project Overview

§ What have we done these two weeks?

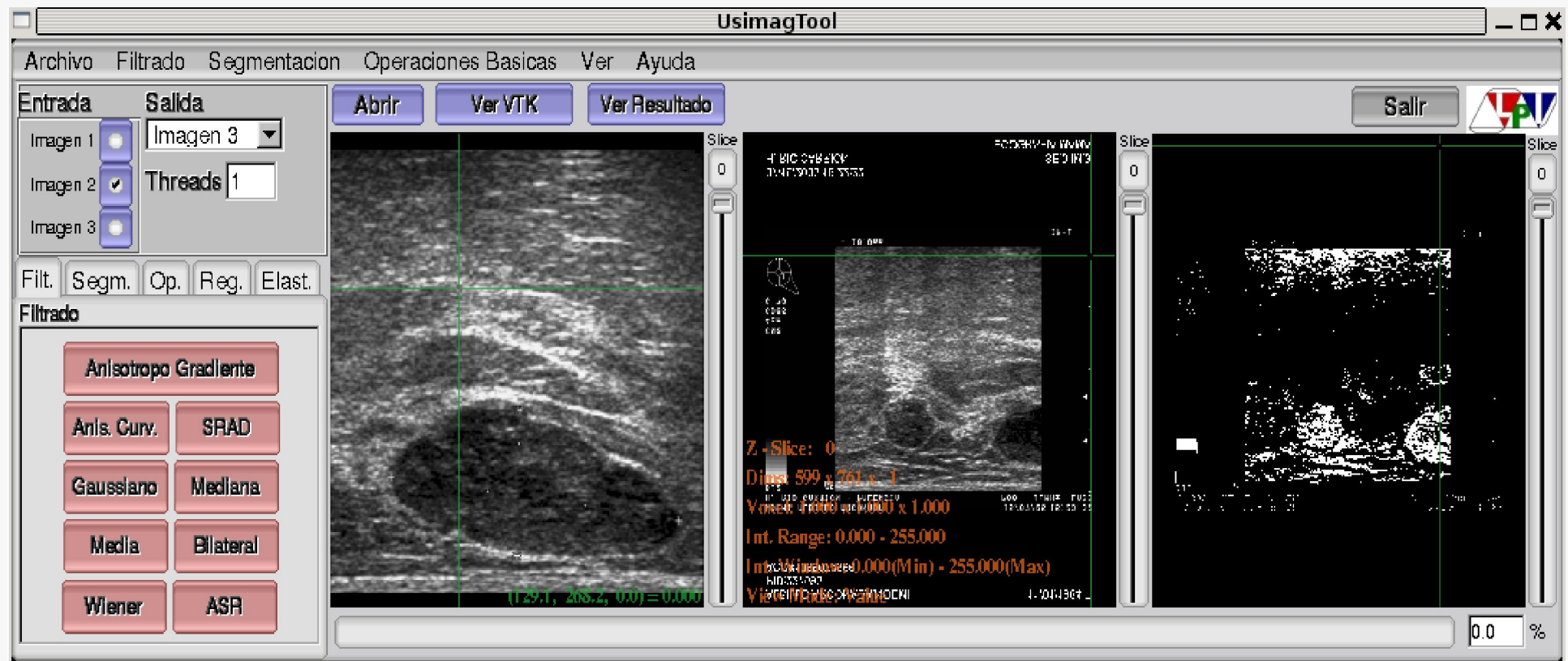


Hard Working!

USIMAGTool

eNTERFACE '07

The SIMILAR NoE
Summer Workshop
on Multimodal Interfaces

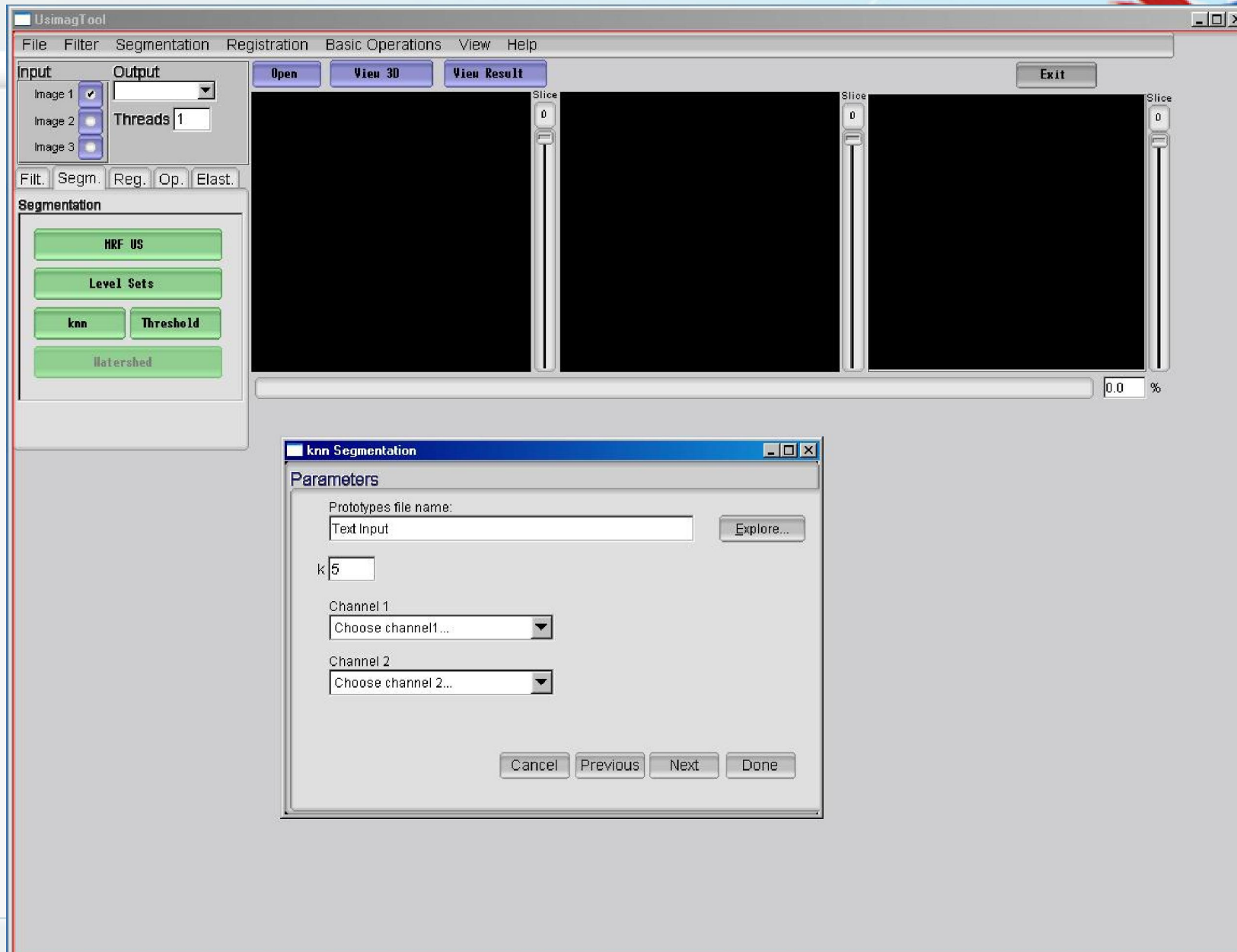


Usimag and usability

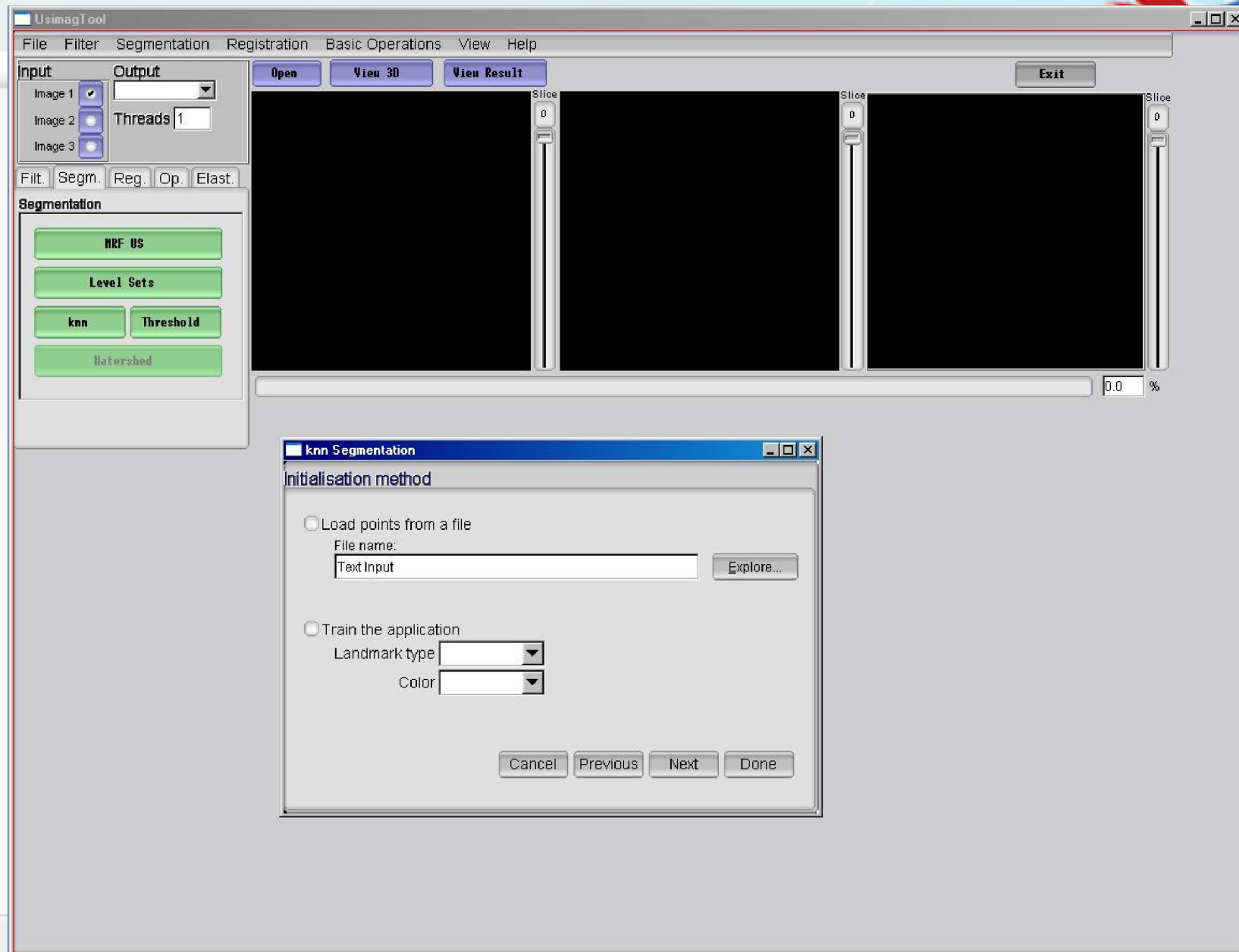
- § Main objective: simplify the manipulation of points of interest and landmarks

- § Approach based on usability standards
 - Usable and stable GUI for segmentation (during eNTERFACE)
 - From monomodal to multimodal application (future work)

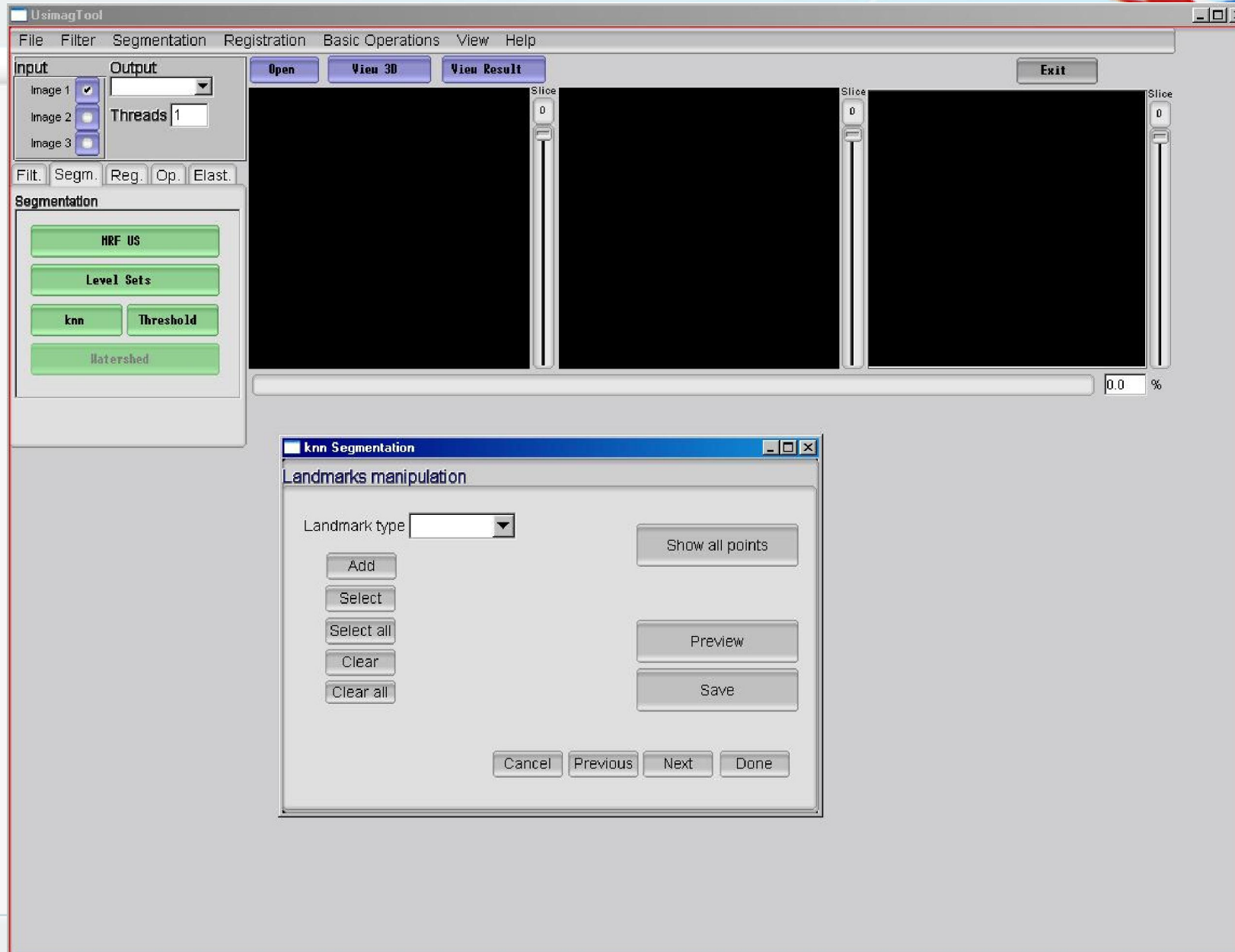
Segmentation GUI



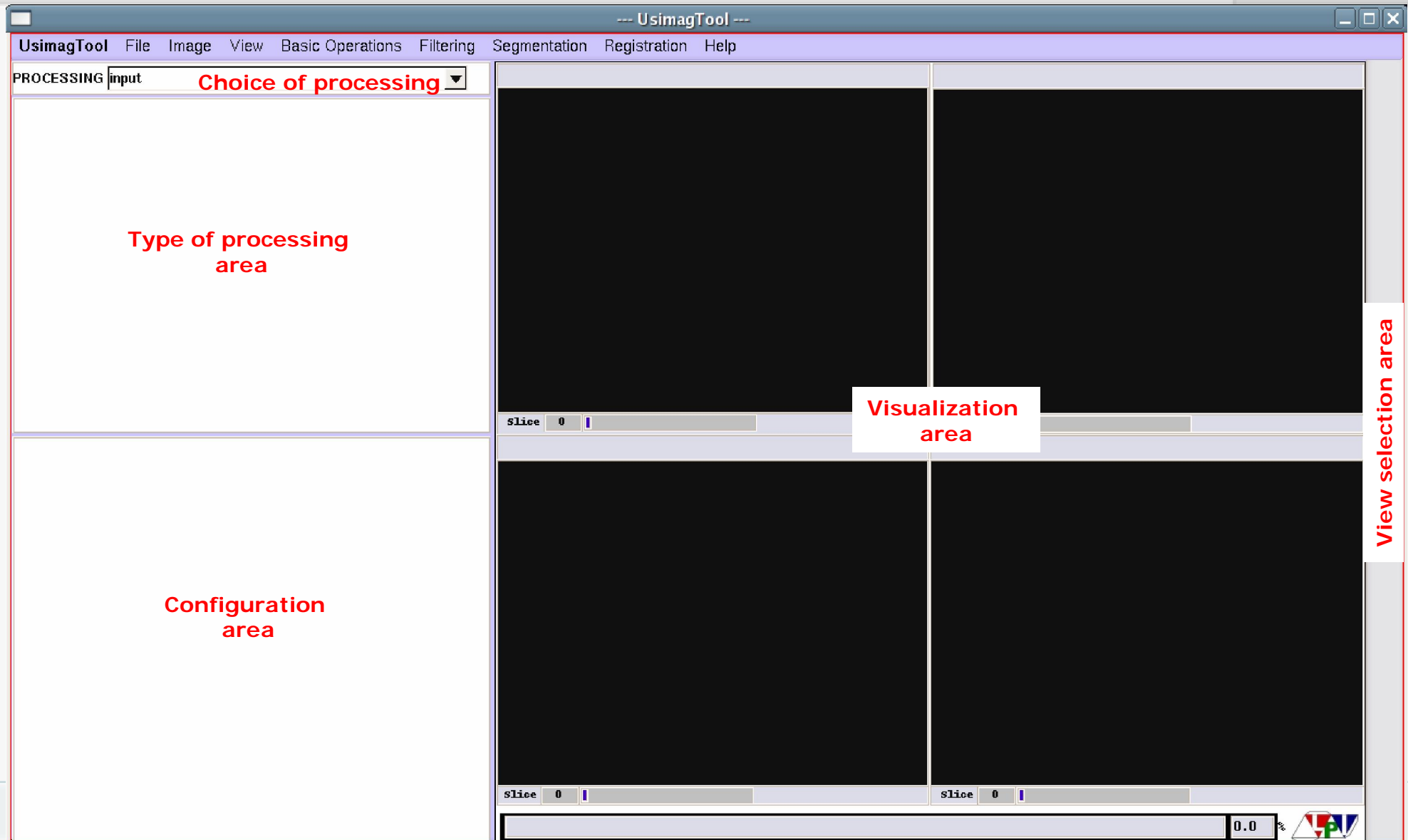
Segmentation GUI



Segmentation GUI



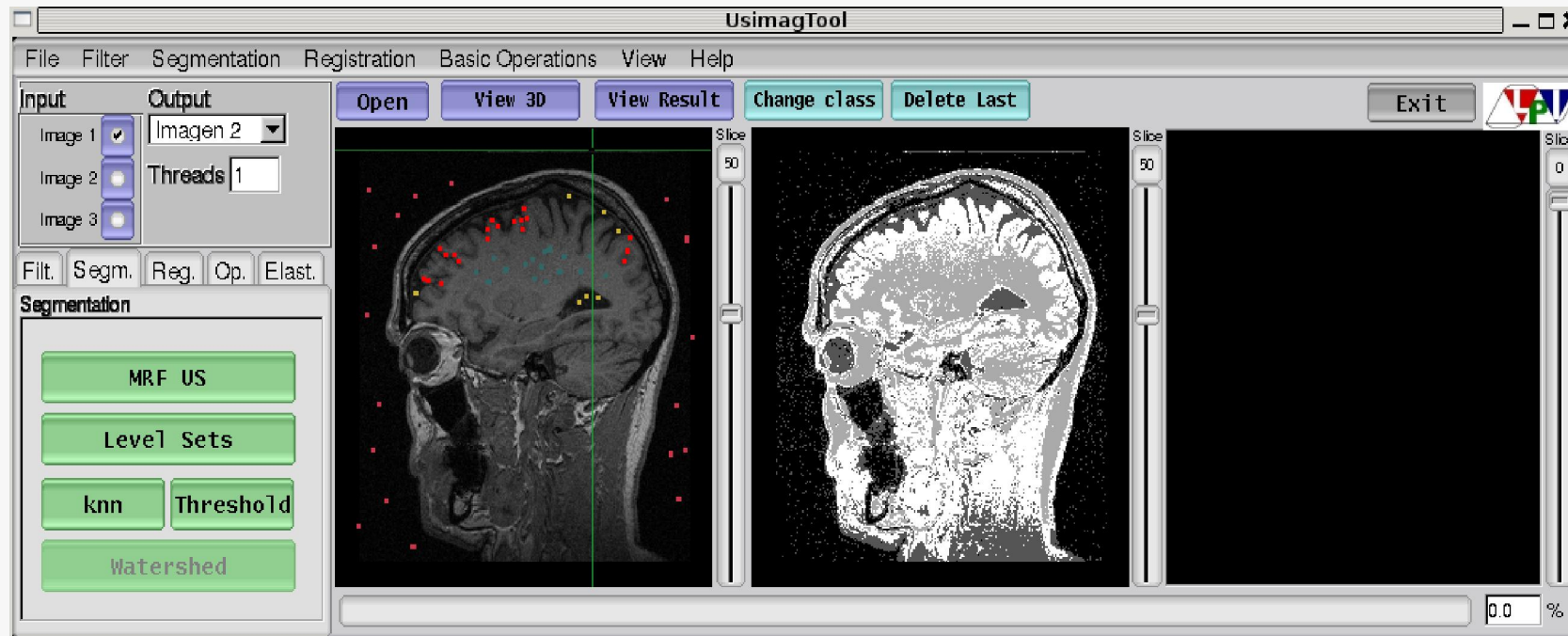
Graphic user interface evolution



Segmentation

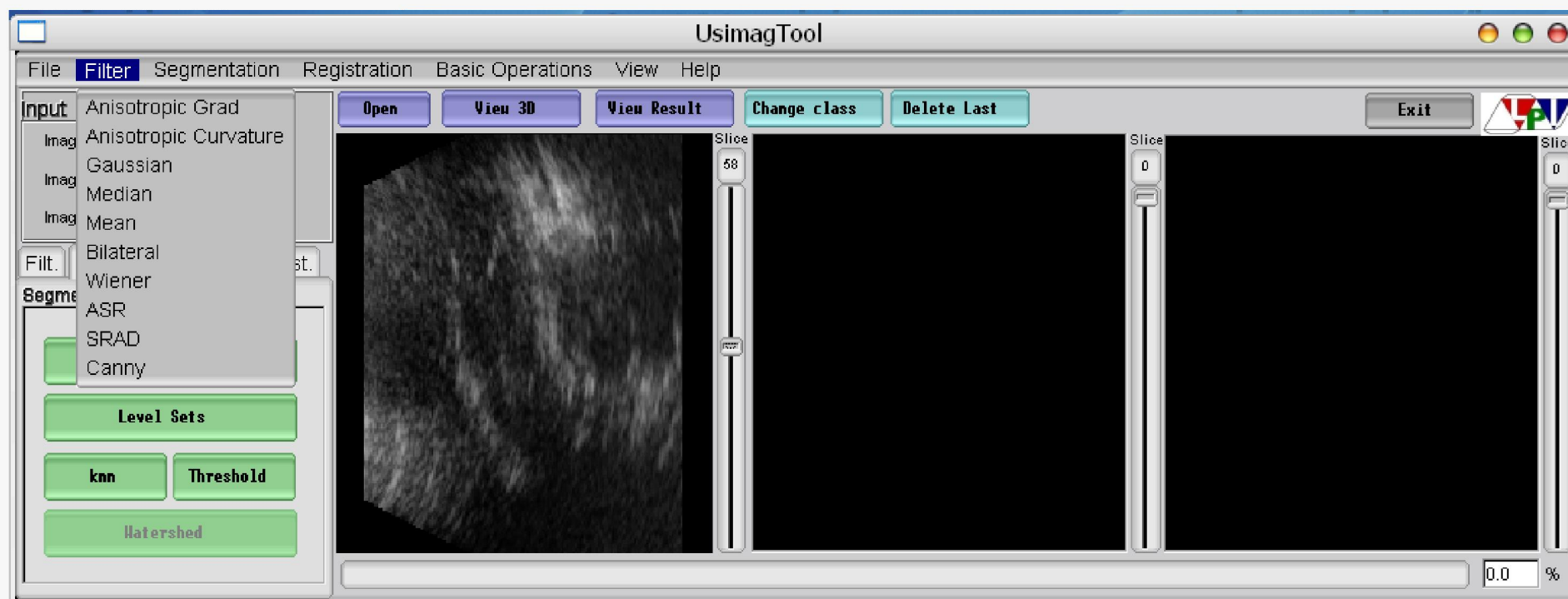


Knn segmentation



Filtering

New filters added



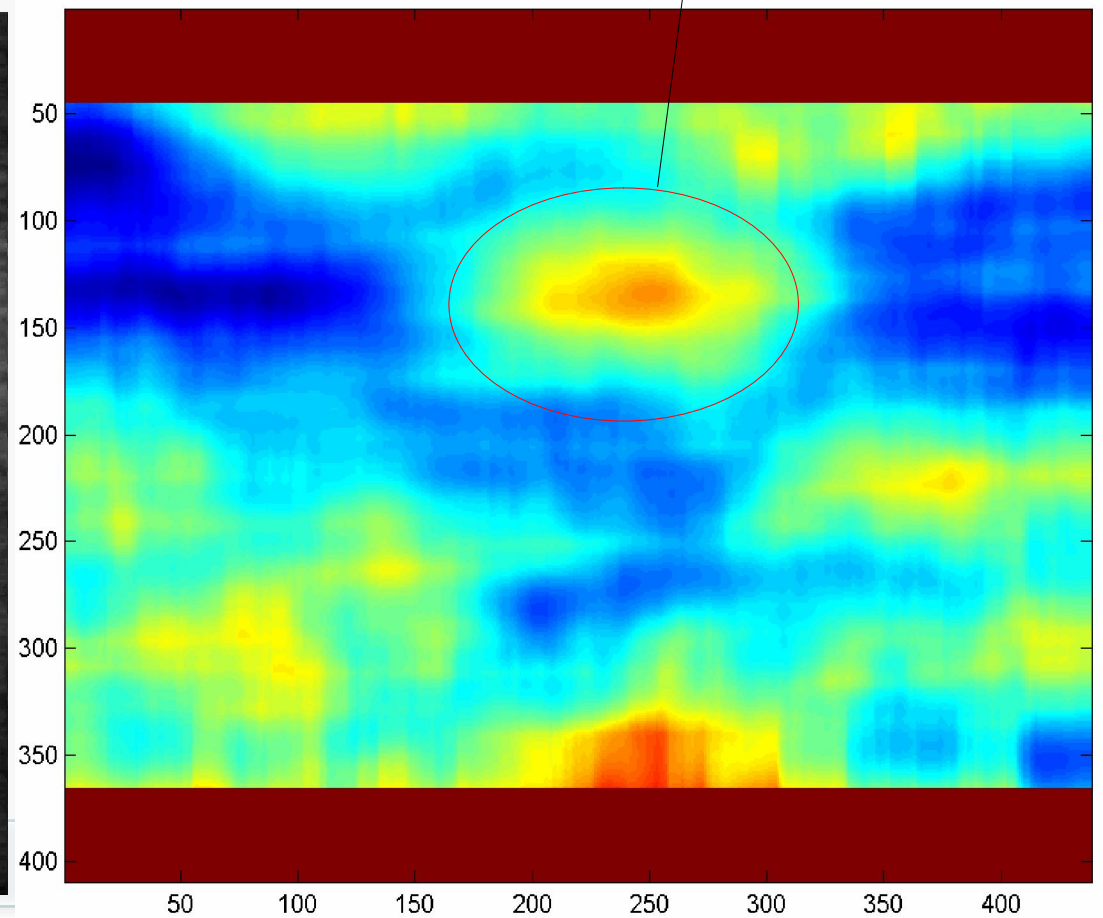


Elastography

Corresponding elastogram for Demons

Input US B-mode Image
Pos

Stiffer Inclusion Detected!!!





Elastography

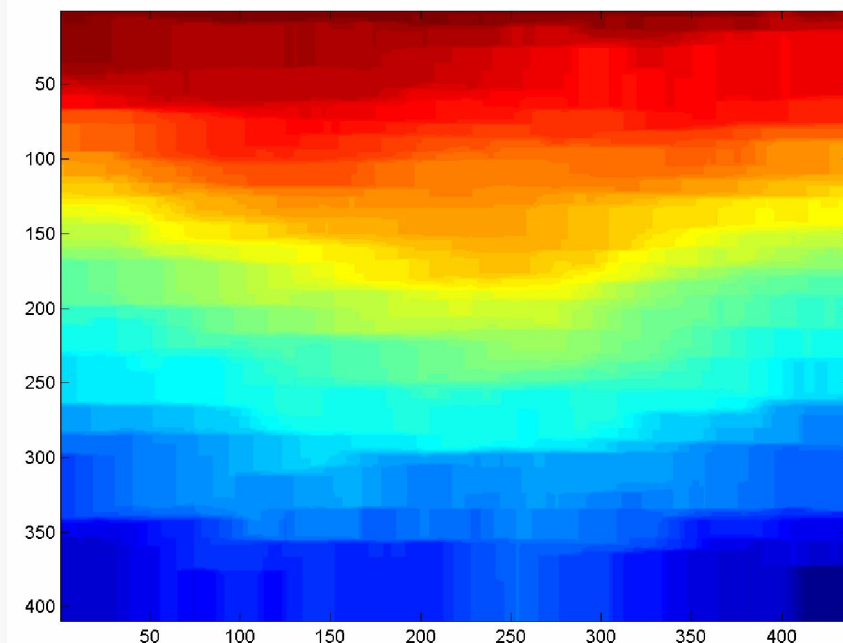
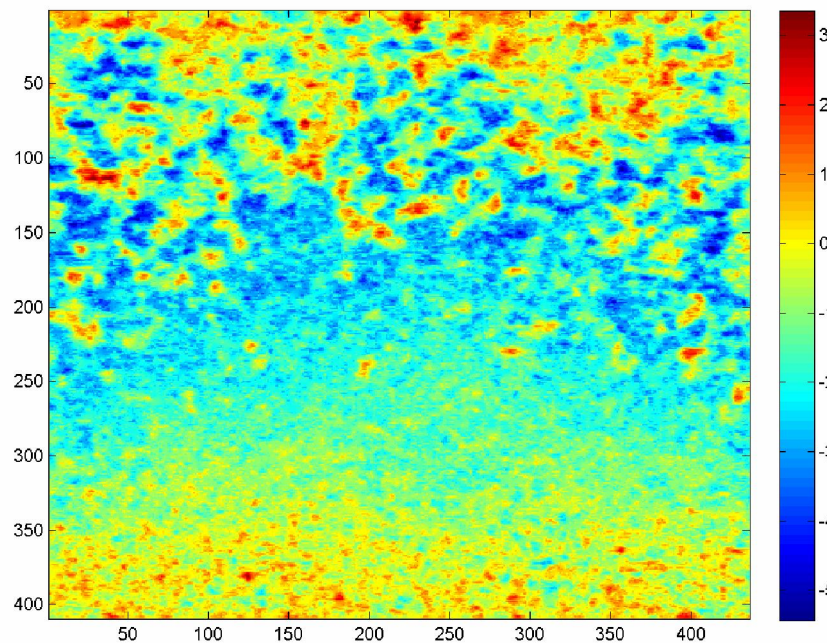
New Displacement Estimation through
Registration

DEMONS

NOW!!!!

big result for Elastography

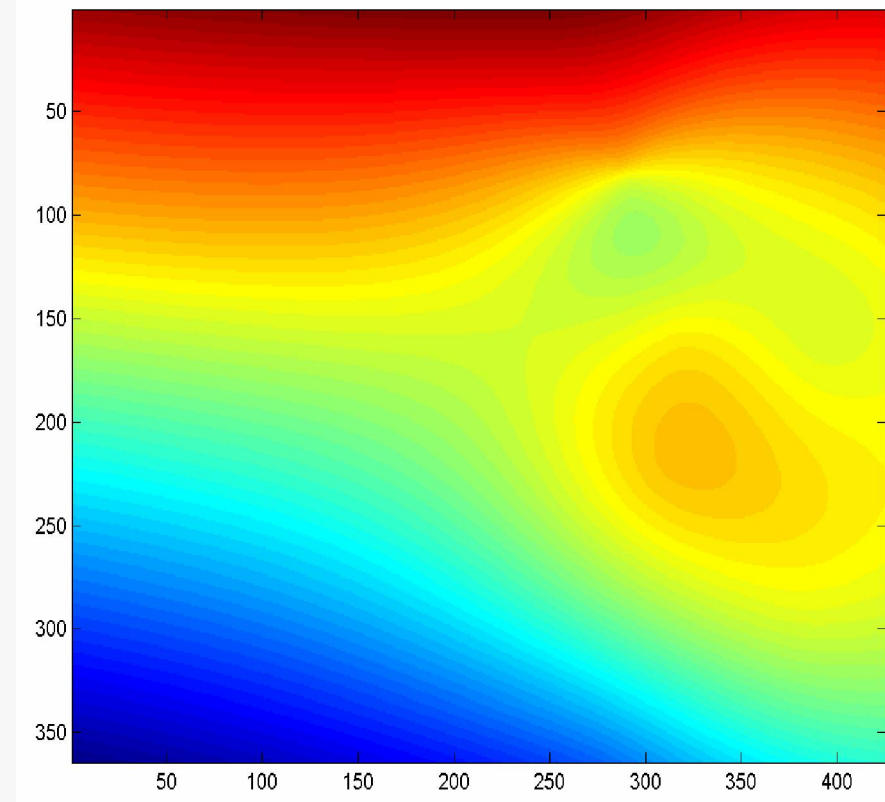
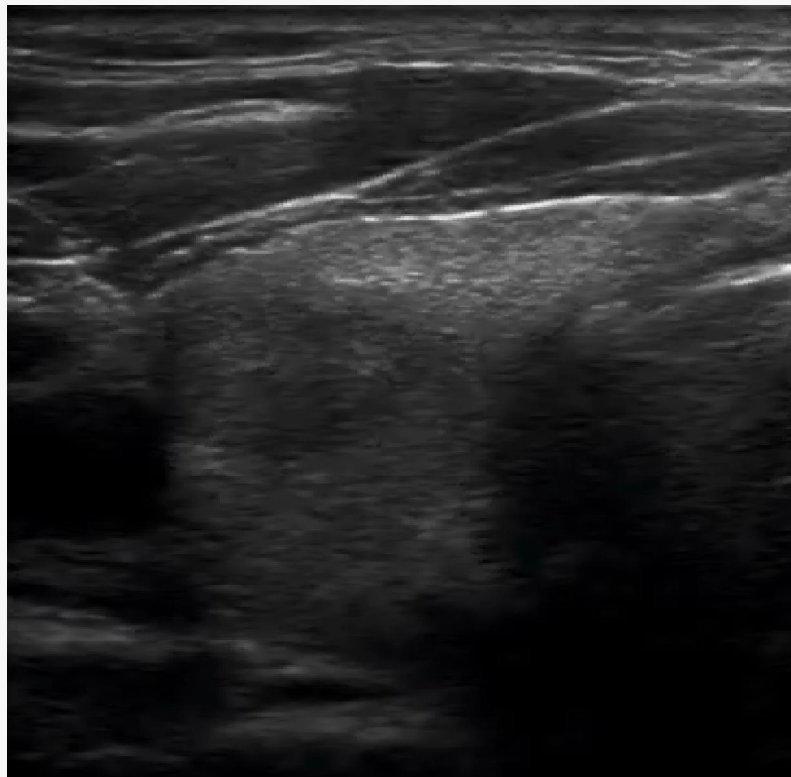
BEFORE



Now working on integration into Usimag Tool

Elastography

TPS – *ongoing adjustment with new Usimag Tools for landmarks*

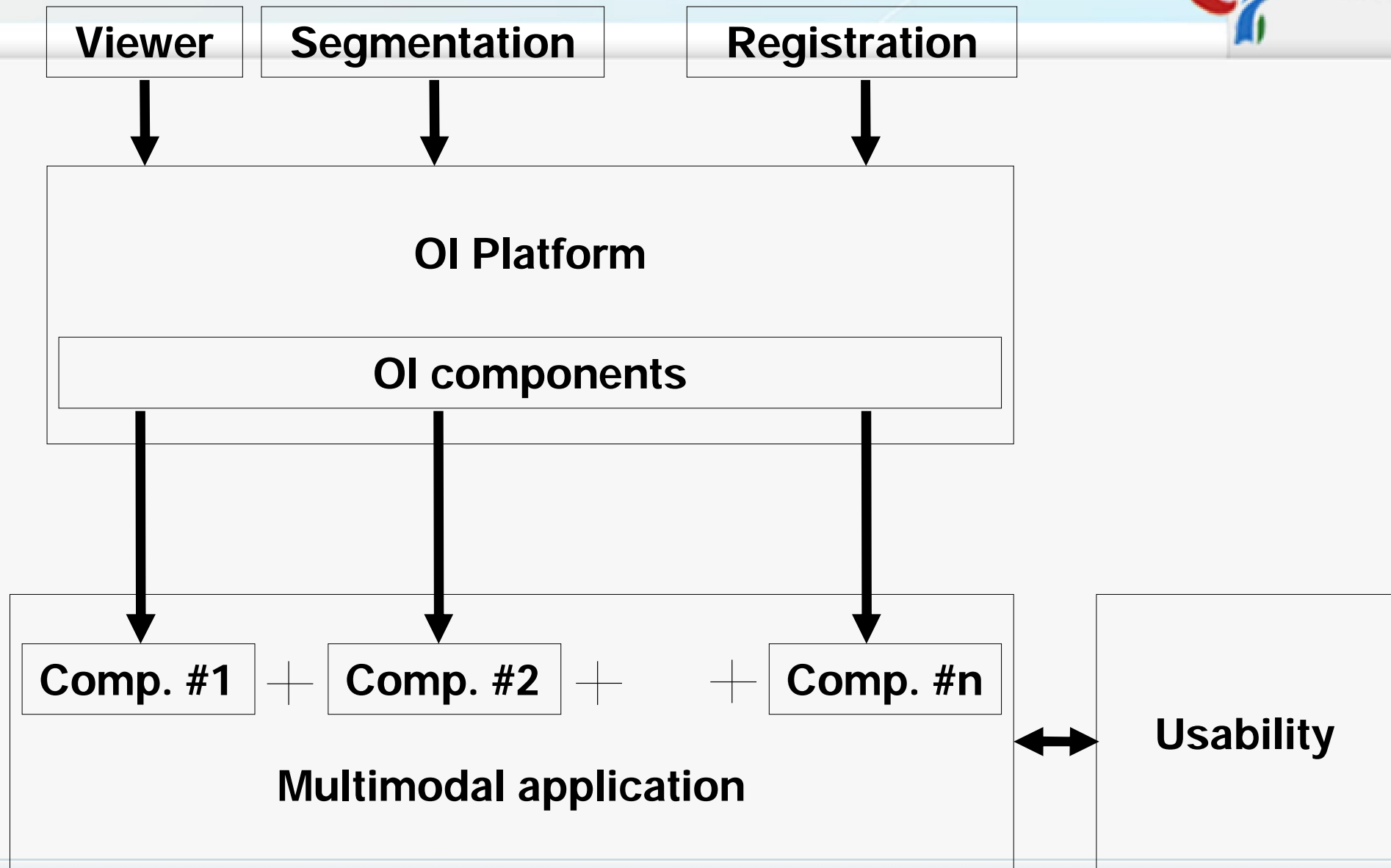


B Spline – ahead
timeline

Optical Flow – postponed due to MULTIMODALITY
stuff



Long term view



Being cool...

§ Preliminary Wiimote integration

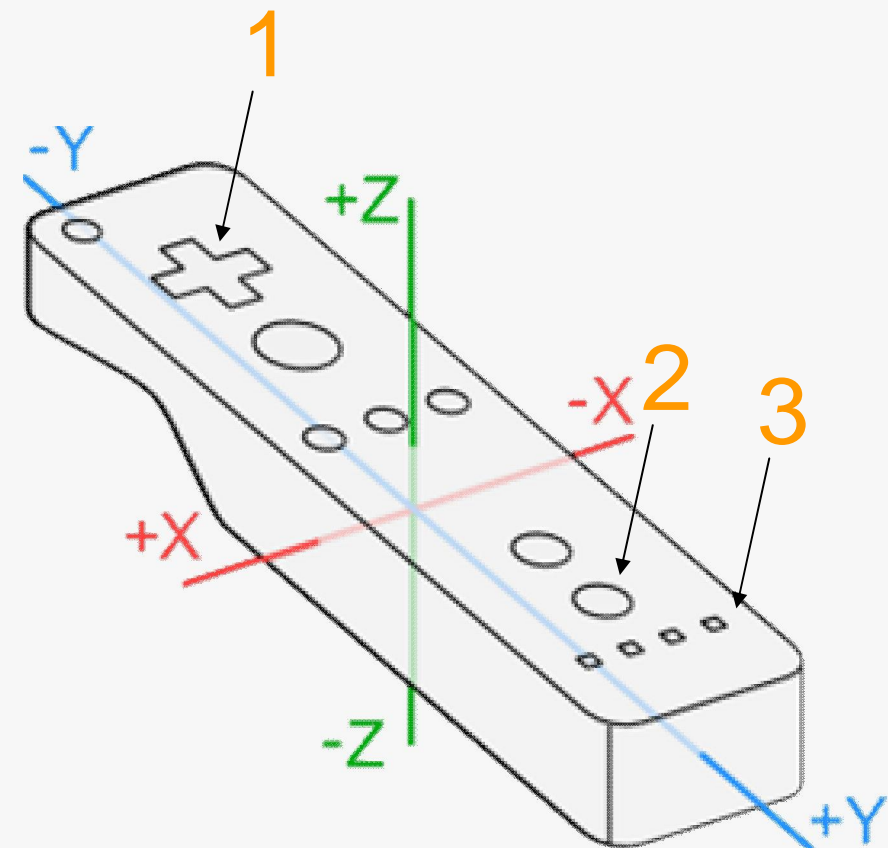
- ú *Wiimote* is a wireless input device. It has a 3-axis accelerometer and 11 buttons.
- ú Customized *Wiiuse* library (www.wiiuse.net)
- ú Written in C. Ment to be portable between Linux and Windows.
- ú Capable of capturing button press events, motion sensing, and will include support for IR pointing.



Navigation on volumes

ú Intended use:

- 1 • Tilt angles (roll & pitch) and keypad to control 3D cursor navigation and zoom level, respectively.
 - 2 • Buttons can replace keyboard.
 - 3 • LEDs might show different user modes.
- It can “rumble” and beep on errors.



To be continued in two weeks...

LOONEY TUNES

"That's all Folks!"

A WARNER BROS. CARTOON

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