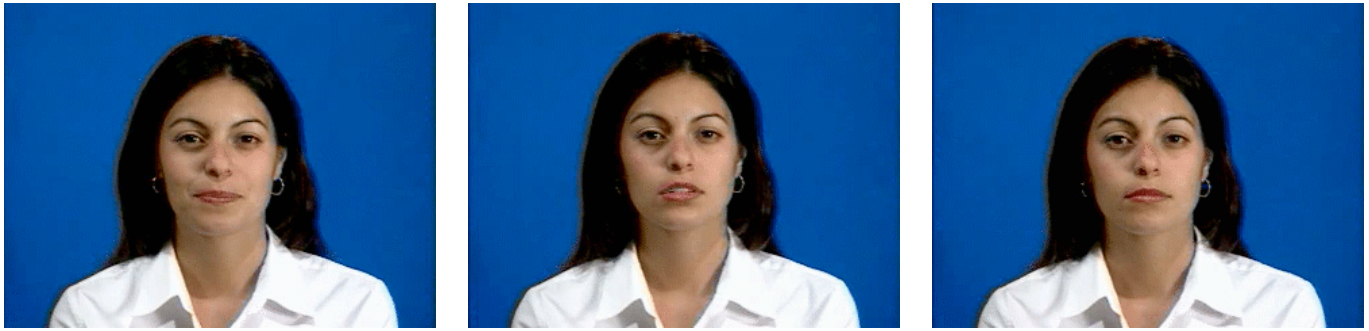
Tomaso Poggio

Project Overview

Two extensions of our text-to-visual-speech (TTVS) system:

- extend our morphing approach from video to audio
- extend the system to use morphing of **3D models** of faces



Ezzat, Geiger, Poggio, 2002

MIT9904-15: Adaptive Man-Machine Interfaces

Tomaso Poggio

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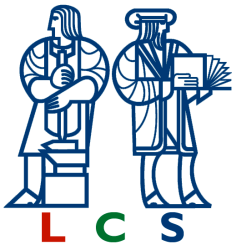
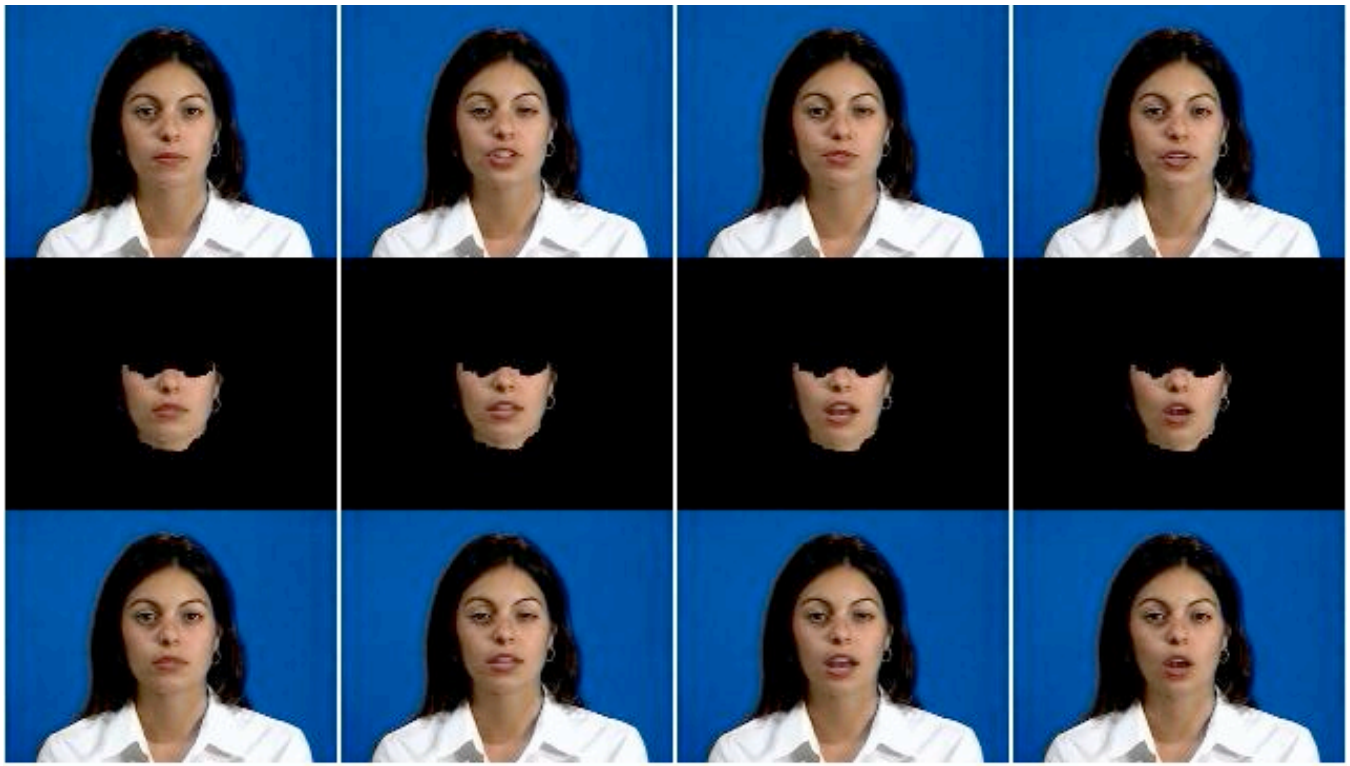


Progress Through June 2002

The new animation system:

Ezzat, Geiger, Poggio 2002



Psychophysical evaluations of the new animation system: Ezzat, Geiger, Poggio 2002

Experiment	% correct	P<
Single presentation	54.3%	0.3
Double presentation	46.6%	0.5

In one experiment (“single presentation”), subjects were shown one animation, and asked to identify whether it was real or not. In the second experiment, subjects were shown two utterances, one real and one synthetic (but in randomized order), and asked to identify which one was real and which was synthetic. In both cases, performance was close to chance level (50%), and not significantly different from it.

Research Plan for the Next Six Months

We plan in the next six months to:

1) Begin extending our morphing approach from video to audio to **address issues of audio synthesis,**
2) Begin extending the system to use morphing of **3D models** of faces -- rather than face images
3) Assess the **intelligibility** of the talking face by performing psychophysical tests similar to the visual “Turing test” ones.