

# ANIMATED SPEECH TECHNOLOGY

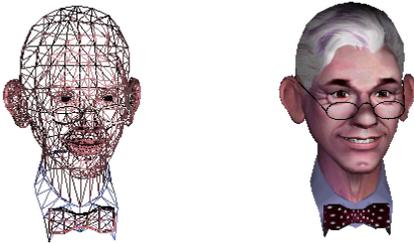
## REAL-TIME, 3D, NATURAL FACIAL ANIMATION

### Bring 3D Characters to Life

Sensory's Animated Speech technology brings 3D objects to life with speech synchronized to mouth dynamics, facial gestures, and emotional expressions.

### 3D Characters

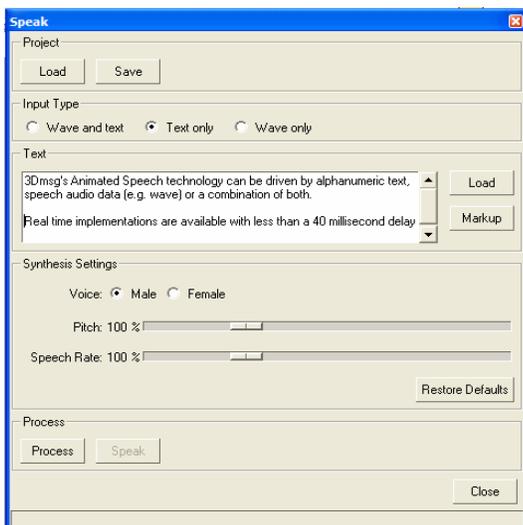
Sensory maintains a comprehensive library of 3D models. We also provide services to create custom characters based on your unique specifications, or to modify your existing 3D models.



### Setting the Animation in Motion

Sensory's Animated Speech leverages Sensory's extensive expertise in Text-to-Speech (TTS) and Speech Recognition technologies. Your choice of several options drives the facial animation engine:

- ▶ Alphanumeric Text
- ▶ Recorded Audio
- ▶ Alphanumeric Text + Recorded Audio
- ▶ Live AudioAttention-Grabbing Applications



With flexible options for driving animation, Animated Speech makes a wide range of compelling applications possible:

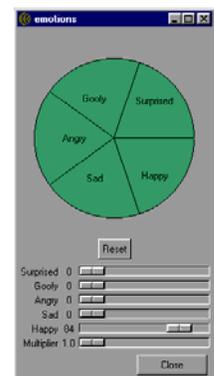


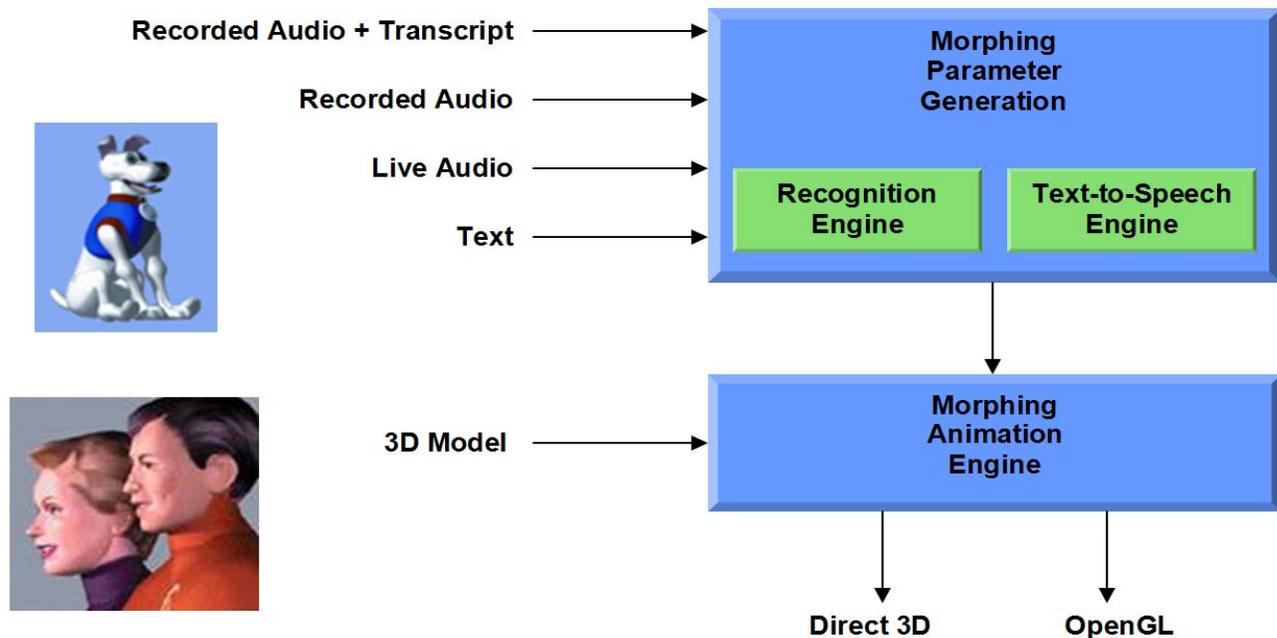
- ▶ Kiosks: Combine Animation, TTS, and Speech Recognition for memorable shopping, information, drive-thru, and ATM experiences
- ▶ Video Games: Rapidly animate game characters with highly accurate mouth and facial movements; create Immersive Reality communities
- ▶ Language Training: Use sophisticated cutaways to show precise mouth dynamics
- ▶ Web Hosts: Support a range of interactive animation solutions like CRM and E-Learning
- ▶ Instant Messaging: Distinguish your offering from the competition with an emotion-enabled avatar
- ▶ Animated Email: Make an impact with talking or singing greeting cards, targeted marketing messages, or as a unique option on an email program.
- ▶ Mobile Animation Agents: Energize live audio broadcasts and telecommunications in real time with a 3D avatar on cell phones and other mobile devices
- ▶ Toys and Games: Realistic animation unleashes many opportunities for children's products.



### Get Emotional

Sensory's Animated Speech takes realism to the next level by giving your characters emotions. Emotional expression can be included rapidly with easy-to-use graphical tools. More complex expressions and gestures can be generated with our unique Emotional Markup Language™ (EML).





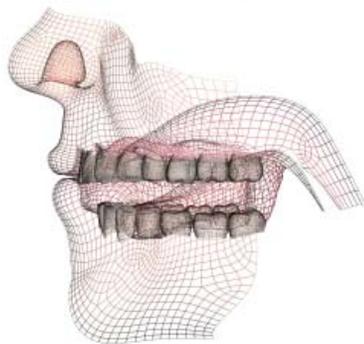
### Singing Synthesis

3Dmsg's Animated Speech can also make your character sing. Driven by either text-to-speech or natural voice input, Animated Speech can automatically generate a singing character based on your 3D model.

### Accurate Articulation

3Dmsg's revolutionary patented approach begins with speech input through voice or text; phonemic recognition engines dice the incoming speech/text data into phonemic units which are assigned visemes, the visual equivalent

of phonemes. Proprietary morphing technology blends the visemes to create a virtually unlimited set of facial muscle, tongue, lip, and teeth movements.



- ▶ Network Delivery: Rendering engine for client provides user control
- ▶ Low Bandwidth: Only voice and/or text data needs to be transmitted
- ▶ Languages: English, Mexican and Castilian Spanish, Japanese, German, French, Italian, Korean (others in development)
- ▶ 3D Model Support: 3D Studio MAX, Alias, LightWave
- ▶ Animation, TTS, and Speech Recognition share common phonemic engine, resulting in smallest integrated package available
- ▶ Rendering Engine: 150 KB
- ▶ 3D Model Size: 100 KB – 10 MB
- ▶ Hardware Acceleration: Direct 3D or OpenGL
- ▶ Real-time performance
- ▶ Singing Synthesis
- ▶ Emotional Markup Language™



### Key Features and Benefits

- ▶ Platforms: Animated Speech solutions can be deployed in server, desktop, and embedded environment
- ▶ Four input modes: text only, recorded audio, live audio, or recorded audio + transcript
- ▶ Output Options: Video File (AVI, QuickTime), Streaming Video (Real, Windows Media, QuickTime)

85-0001-A Product Brief	
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