Radio Storyteller

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Radio Storyteller is an MP3 Jukebox that empowers children to build their own radio shows. Currently, MP3 software "for kids" is the just like adult MP3 software except with a more colorful interface, or "skin." Radio Storyteller incorporates user-friendly sound recording and editing tools that allow children to insert their own voices into the mix.[1] Whereas some MP3 players on the market enable users to mimic their favorite artists by dampening existing song vocals with a "karaoke" function, Radio Storyteller offers a library of evocative sound effects to frame and stimulate children's *own* narratives.

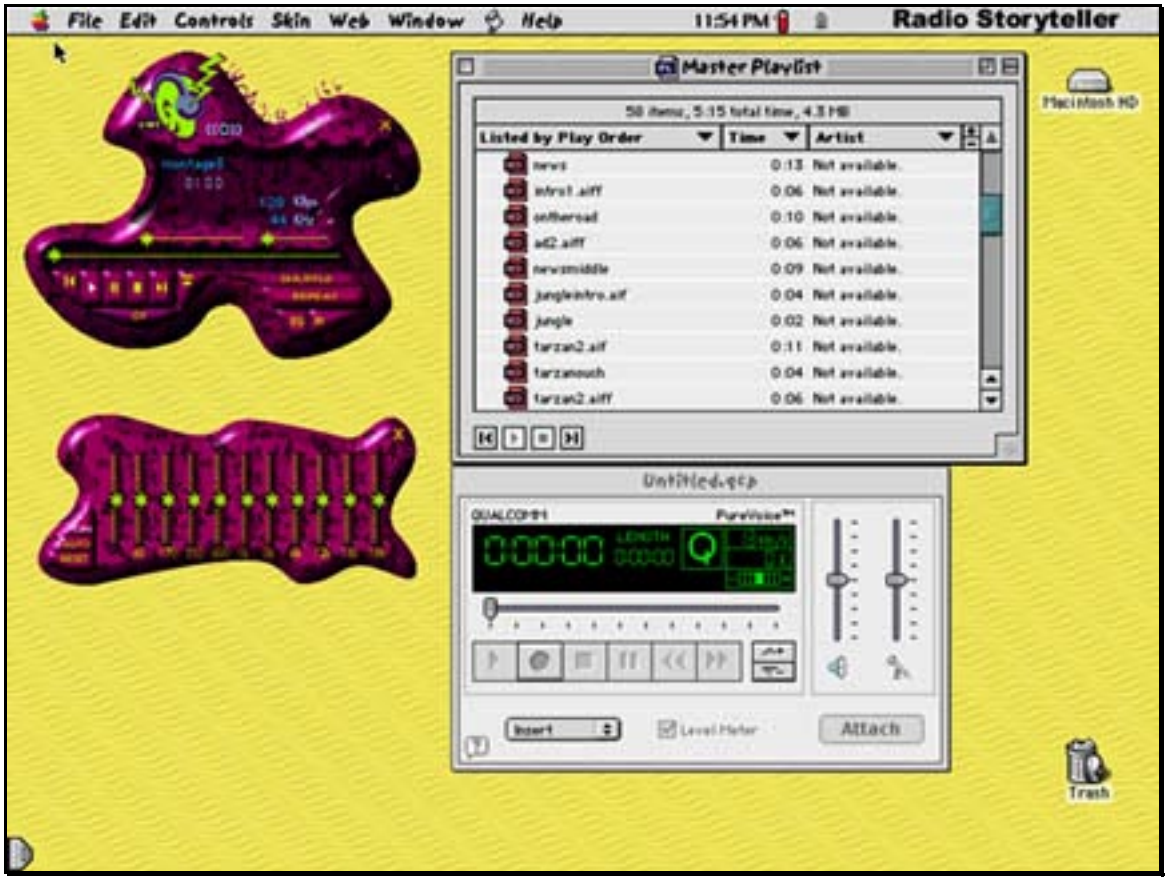

Fig. 1 — The Radio Storyteller demo used Casady & Greene's "SoundJam Pro MP Plus" (left & top right) to encode, arrange, and play audio files; Qualcomm's "Pure Voice" (bottom right) for voice recording; and, Macromedia's "SoundEdit" for editing sound effects. These applications were selected for their usability and relevance to the project at hand, but were intended primarily for proof of concept. They approximate the basic controls needed and the relative allocation of screen space. The next stage of development will require an orginal and improved interface.

Radio Storyteller comes with an external microphone. Users speak into the microphone and digitally record their voices, then drag-and-drop sound effects to frame and accentuate the spoken narrative. Built-in sound editing features permit more advanced users to edit vocal tracks, create new sound effects, or interpose vocal and sound effects in more sophisticated ways than the drag-and-drop interface might allow. When users have arranged the playlist to their satisfaction, they can press a "GO LIVE" button and publish the show to the Radio Storyteller Web page. The site, though not part of the current demo, would be a for-kids version of existing do-it-yourself broadcast sites, constantly streaming user-submitted audio programming. The Web site would also provide a space for users to post and exchange custom-made sound effects.

STANDARD MP3 JUKEBOX

* Plays digital audio files
* Encodes CDs into digital files
* Allows users to create and rearrange playlists
* Limited voice-record function
* Karaoke function (not recordable)

RADIO STORYTELLER

All of the above, plus…

* Kid-friendly interface
* Extensive sound effects library
* Integrates voice record and sound editing mini-studio
* Packaged with microphone
* Allows users to upload radio shows to the Web

Fig. 2 — Summary of Features

While the public performance associated with an Internet broadcast gives users added incentive, encouragement, and feelings of accomplishment, Radio Storyteller is primarily about process, not finished product. With and without a tape-recorder, children have long enjoyed performing their own radio shows. We know that telling stories helps children make sense of the world around them, build language skills, and practice developmentally sophisticated modes of thought, and that mediated systems can stimulate more complex storytelling than children might otherwise practice on their own.[2] Radio Storyteller engages children's creativity by offering them suggestive yet open-ended sound effect options to support and frame their own narratives. Unlike many entertainment products directed *at* children, Radio Storyteller is intended *for* children. The system comes with no preset stories—set to music or otherwise—so children are free to create their own.

In assembling the Radio Storyteller demo, nondiegetic and diegetic sound effects were selected for their potential to evoke, denote, and amuse—in that order. The nondiegetic sounds, or "theme music," offer a quick means to establish genre and frame the play act as a whole. An orchestral lead-in to a news broadcast, for example, clearly conveys the message that "this is a news broadcast" but also, as Gregory Bateson suggests, establishes that this is *not* a news broadcast, that this is play, that within this frame anything goes.[3]

The diegetic noises include both representations of real-world events (e.g., car engine, lightning, creaky door) and more fantastical effects (e.g., laser, cartoon car, space ship) that point toward an expansive play universe. Some sounds may be recognizable by genre (e.g., Western saloon) or even series (e.g., Jetsons jingle) on the assumption that, as Lois Rostow Kuznets notes, "children can put their own twists even on material as thoroughly commercialized, played out, and formulaic as a television cartoon adventure."[4] Radio Storyteller encourage creative appropriation by juxtaposing story worlds and genres, as kids often do when playing with toys and action figures on their own, and furnishing only brief snippets from any given text. Thus, Radio Storyteller privileges children's expressions of self over those supplied by popular culture.

In our culture, software is seldom gender neutral, but Radio Storyteller's intrinsic open-endedness would seem to bridge the gender divide, or at least complicate it. The author recalls "producing" a radio show starring himself, age 11, with his younger sister playing his sidekick. Although she was only four or five at the time, the younger sister recently—without prompting—recalled that afternoon in the "recording studio" (a.k.a. mother and father's bedroom) as one of her favorite childhood memories. Likewise, while the power dynamics may vary from "recording studio" to "recording studio," it stands to reason that a system like Radio Storyteller would invite peer collaboration (and individual use) across gender lines. For one thing, telling stories is something all children do. Second, Radio Storyteller's sound effects library contains sounds suited for a wide range of narratives (and the user can always add his or her own). Third, as with existing MP3 Jukeboxes, the interface "skins" are interchangeable so that the user can choose a design to reflect his or her particular temperament (or, as always, design his or her own).

Not inconsequentially, all of this points to Radio Storyteller's broad appeal and applicability. Younger children can record their stories on the computer, frame them with theme music, and publish onto the Web. More advanced users can interject/overlay various noises and effects, digitally create new sounds, and trade them online. As users grow older and become more interested in popular music, they can use Radio Storyteller to produce and narrate mix tapes for friends. Eventually, they will have picked up the basic skills necessary to express themselves through digital sampling and become active participants in the emerging music culture.

Though not "pedagogic" in the didactic sense, Radio Storyteller empowers children over language and culture, incrementally exposes them to new technologies, and encourages dynamic—and developmentally significant—expressions of self.

[1] Certain higher-end MP3 Jukeboxes do allow voice recording, such as SoundJam Pro, on which the Radio Storyteller demo is based. However, the voice recording feature is buried in the interface and, in our experience, tends to crash the system.

[2] Justine Cassell, et al., "Shared Reality: Physical Collaboration with a Virtual Peer" (MIT Media Laboratory, 1999); Cassell and Ryokai, Kimiko, "Making Space for Voice" (*Personal Technologies*, forthcoming).

[3] Bateson, Gregory. "A Theory of Play and Fantasy" (1976) in Brunner, Jolly & Sylva (eds.), *Play: Its Role in Development and Evolution* (New York: Basic Books.

[4] Kuznets, Lois Rostow. "On the Couch with Calvin, Hobbes, and Willie the Pooh" in *When Toys Come Alive: Narratives of Animation, Metamorphosis, and Development* (New Haven: Yale University Press, 1994), 46.