Ak

An Audio Toolkit for Tcl & Tk

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Outline

- AudioFile
- Ak details and code examples
- Implementation
- Future work

AudioFile

- ***Network-transparent, device-independent audio system***
- ***Emphasis on client-side handling of audio***
- ***Unique model of time***

Abstractions

- ***Connections to AudioFile servers:***
  ```
  audioserver main "north-fork:0"
  ```
- ***Device contexts:***
  ```
  main context room-device -device 1
  ```
- ***Requests ("audio widgets")***
- Types: play, action, record, passthrough
- Operations: create, config, delete

digital

Request Examples

- ***Create play request:***

```
set req [room-dev create play "hello.au"\
 -start {now +5s} -stop {now +6s}\
 -offset {+10s}]
```

- ***Configure the request:***

```
room-dev reqconfig $req -stop {now}
```

- ***Create an action:***

```
room-dev create action \
 "puts stdout STOP!" -at {now +5s}
```

Events

- ***AudioFile events:***
  ring, hookswitch, loop current, DTMF detect

```
phone-dev bind <RingStart> \
 "phone-dev hook off"
```

- ***Command substitution***

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Implementation

- 2,500 lines of C
- Request type table
- Audio time scheduler
- Mostly independent of Tk

The Future

- ***Lots of work left!***
- ***Applications:***
  - Full-featured tape deck
  - Multimedia presentations and tutorials
  - Telephone inquiry system
- ***Design a signal processing architecture***
- ***First release at end of summer***