

# ***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

# 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**

# *Implementation*

- ❑ *2,500 lines of C*
- ❑ *Request type table*
- ❑ *Audio time scheduler*
- ❑ *Mostly independent of  $T_k$*

# *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*