Opening Up IIHS Video with SpokenMedia

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Case Study of Using SpokenMedia for IIHS

- Demonstrate transcripts and translations of IIHS videos
- Describe the process and our experiences
  - Transcribe -> Edit -> Translate -> Present
The Indian Institute for Human Settlements (IIHS) will... “create India’s first independent National Innovation University focused on the challenges and opportunities of its urbanisation.”

January 2010
“The IIHS Website is our commitment to a different way of looking at things.”

– Aromar Revi
5 January 2010
“The Institution will fail or scale based on language.”

– Aromar Revi
5 January 2010
What did we do?

Auto Transcribe → Edit → Translate → Present
Challenges of Planning, Critical Challenges facing Cities of Global South, IIHS, and Challenges within the IIHS Curriculum Framework

I think one central challenge of planning is legitimacy of government as a key institution that should be involved in bringing the change. The legitimacy of the government is under attack in many different parts of the world so that it has to be reestablished as a major planning institution. I think the second challenge for planning at least in the US or the west is that the market is...
How did we do it?

Auto Transcribe ➔ Edit ➔ Translate ➔ Present
How do we do it?
Lecture Transcription

- Spoken Lecture: research project
- Speech recognition & automated transcription of lectures
- Why lectures?
  - Conversational, spontaneous, starts/stops
  - Different from broadcast news, other types of speech recognition
  - Specialized vocabularies
Spoken Lecture Project

James Glass
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• Processor, browser, workflow
• Prototyped with lecture & seminar video
  – MIT OCW (~300 hours, lectures)
  – MIT World (~80 hours, seminar speakers)

Supported with iCampus MIT/Microsoft Alliance funding
We used a portion of the SpokenMedia process for the demo
How did we do it?

- Auto Transcribe
- Edit
- Translate
- Present
<table>
<thead>
<tr>
<th>Automatic Transcription</th>
<th>Hand Transcription</th>
<th>Time Adjusted</th>
<th>Translated Hindi</th>
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<tbody>
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| so                      | challenge          | central       |                  |
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| challenger              | planning           | challenge of  |                  |
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| legitimacy              | of                 | legitimacy of |                  |
| of                      | government         | government    | सरकार की एक ऐसी मुख्य
                       |                    |               | संस्थान के रूप में वैधता |
| government              | as                 | as            |                  |
Automatic Speech Recognition Accuracy

- **Accuracy**
  - Domain Model and Speaker Model
  - Internal validity measure
  - Seed with transcript

Ongoing research by Jim Glass and his team @ MIT
How did we do it?

Auto Transcribe  Edit  Translate  Present
Challenges of Planning, Critical Challenges facing Cities of Global South, IIHS, and Challenges within the IIHS Curriculum Framework

I think one central challenge of planning is the legitimacy of government as a key institution that should be involved in bringing the change. The legitimacy of the government is under attack in many different parts of the world so that it has to be reestablished as a major planning institution. I think the second challenge for planning at least in the US or the west is that the market is...
SpokenMedia today…

- **Features**
  - Video linked transcripts
    - Automated Lecture Transcript creation
    - Simple transcript editor (April 2010)
  - SpokenMedia Player
    - “Bouncing Ball” (underline text) follow along
    - Search within a video
    - Multiple transcript language support

- **Challenges**
  - Accuracy (partial toolset)

SpokenMedia Player could be used for MIT OCW Videos
Where are we heading?

- Improved accuracy
- Search across multiple video transcripts
- New players with bookmarking, annotation, “paper-based video”
- Automate and improve processing
  - > Starting a lecture transcription service
Check it out for yourself

- IIHS Demo: http://spokenmedia.mit.edu/demo/iihs/
- SpokenMedia Website: http://spokenmedia.mit.edu/
- Upload Videos for Automated Lecture Transcription: http://sm.mit.edu/upload
Thank You!

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