

# 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.”*

*– Indian Institute for Human Settlements:  
Curriculum Framework Version 3.0  
January 2010*

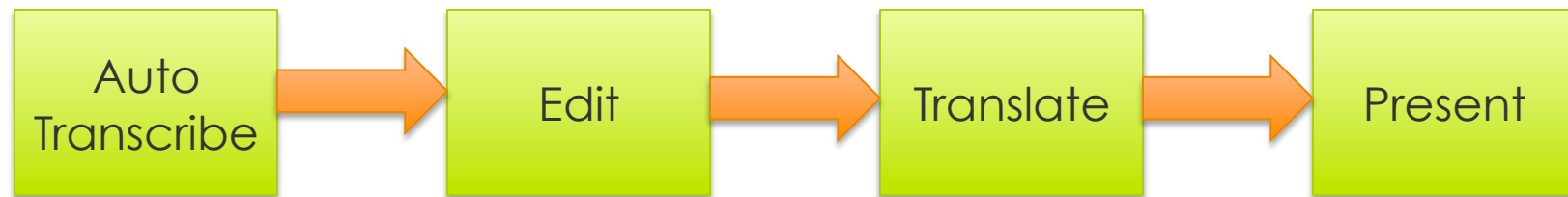
*“The IHS Website is our  
commitment to a different  
way of looking at things.”*

*– Aromar Revi  
5 January 2010*

*“The Institution will fail or scale  
based on language.”*

*– Aromar Revi  
5 January 2010*

# What did we do?



### Challenges of Planning, Critical Challenges facing Cities of Global South, IIHS, and Challenges within the IIHS Curriculum Framework

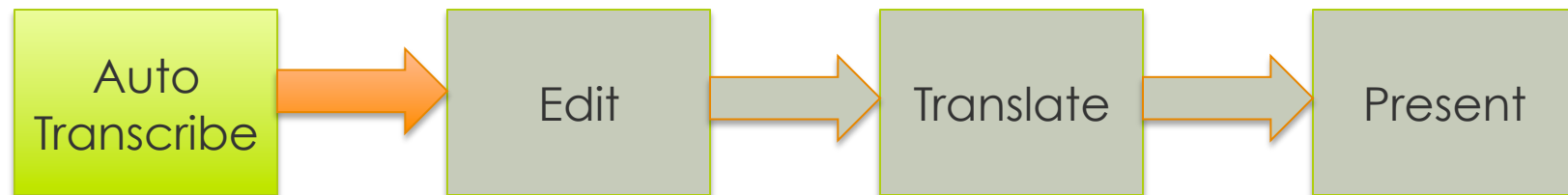


Prof. Bish Sanyal

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

Audio English (US) Transcript English (US)

# How did we do it?





# How do we do it?

## Lecture Transcription

James Glass  
glass@mit.edu



- 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  
glass@mit.edu

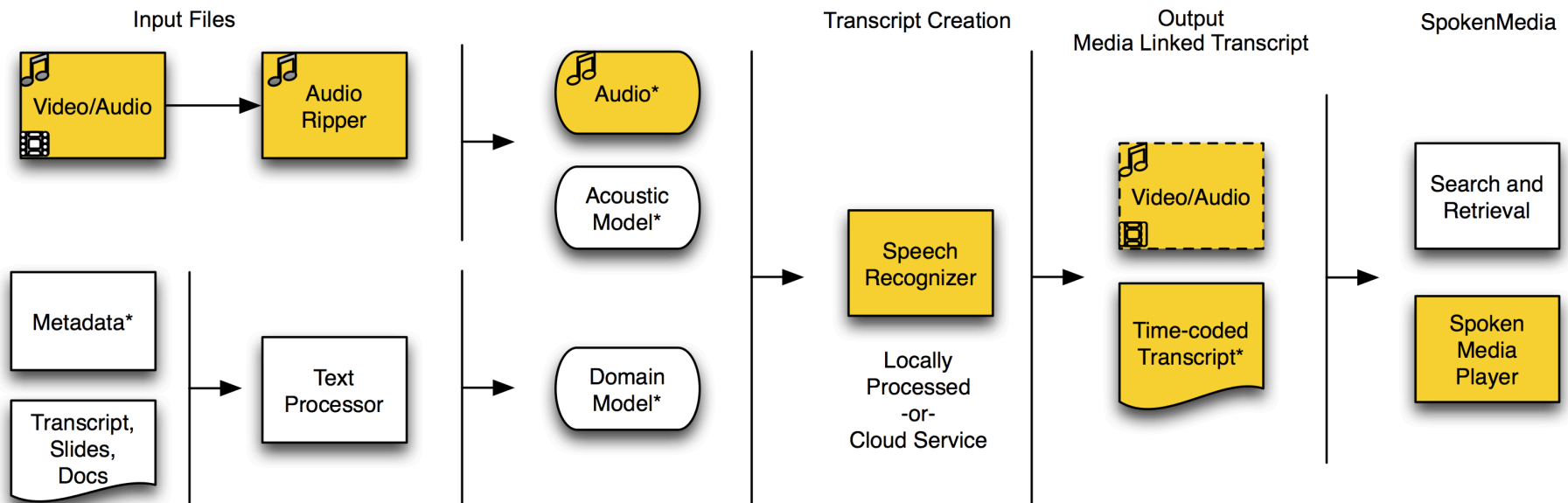


- Processor, browser, workflow
- Prototyped with lecture & seminar video
  - MIT OCW (~300 hours, lectures)
  - MIT World (~80 hours, seminar speakers)

Supported with iCampus MIT/Microsoft Alliance funding

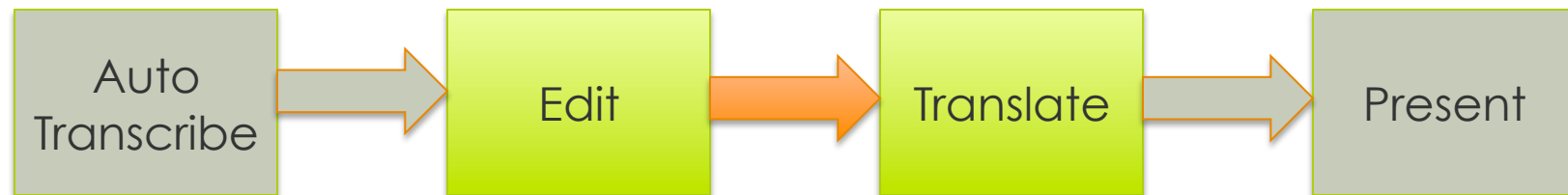


# SpokenMedia Process



We used a portion of the SpokenMedia process for the demo

# How did we do it?



# Edit & Translate: Accuracy

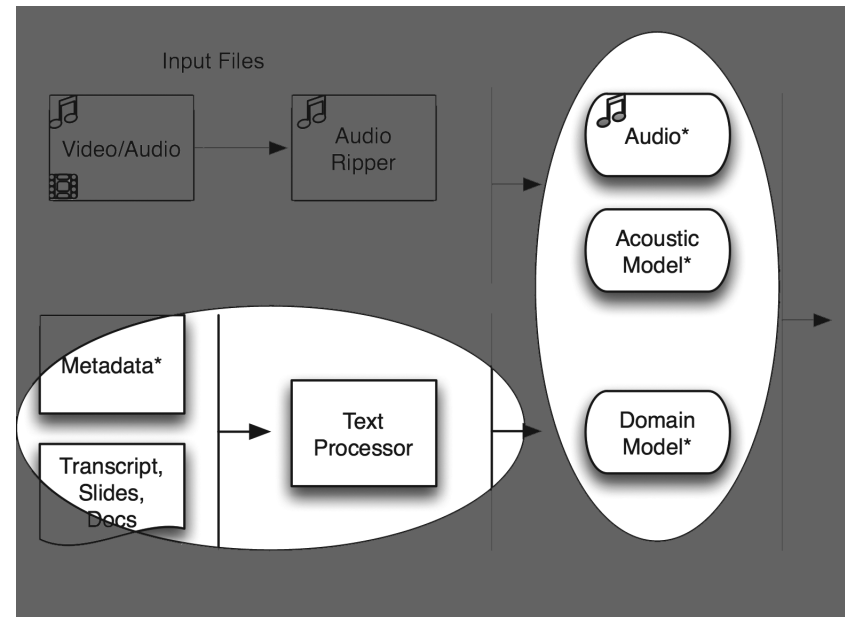
Automatic Transcription	Hand Transcription	Time Adjusted	Translated Hindi
I	I	I	मेरे खयाल से
think	think	think	
once	one	one	नयोजन की एक मुख्य चुनौती है
and	central		
so	challenge	central	
the	of		
challenger	planning	challenge of	
planning	is	planning	
nice	legitimacy	is	
legitimacy	of	legitimacy of	
of	government	government	सरकार की एक ऐसी मुख्य संस्थान के रूप में वैधता
government	as	as	

# Automatic Speech Recognition Accuracy

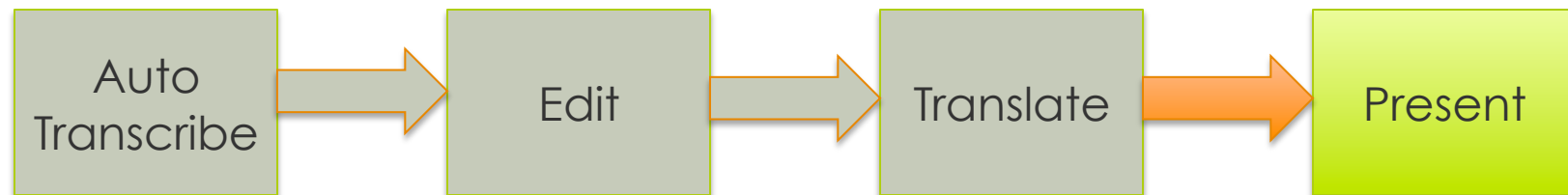
## ■ Accuracy

- 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?



### Challenges of Planning, Critical Challenges facing Cities of Global South, IIHS, and Challenges within the IIHS Curriculum Framework



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Audio English (US) Transcript English (US)



# 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

**SpokenMedia Player could  
be used for MIT OCW Videos**

## ■ Challenges

- Accuracy (partial toolset)

# 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>

SPOKENMEDIA AVAILABLE FOR  
TESTING

If you want to try out  
SpokenMedia, you can upload  
video and we'll automatically  
create a lecture transcript for you!

Upload Video

# Thank You!

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Peter Wilkins, [pwilkins@mit.edu](mailto:pwilkins@mit.edu)