Auditory Scene Analysis

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Auditory Scene Analysis

- What is it?
- Why do it?
- How?
System Requirements

- Listen passively
- Digest
- Interpret
- Analyse
- Transcribe

- For example........
Applications

- Music
- Speech
- Music & Speech
- Environment
  - Military (eg. underwater)
  - Biological etc
Challenges

- Identify sources reliably?
- Source separation?
- Noise?
- Reverberation?
- Segmentation?
- Realtime operation?
Musical instrument ID

- Current system capable of:
  - Identifying 19 instruments
  - Monophonic isolated sounds
  - Adaptive
  - Capable of up to 90-95% accuracy and reliability when adapted to a given collection of instrument sounds
  - Building block for complete system