



hSITE ARR 2011 report

Fabrice Labeau

Mohsen Akbari

Hoda Daou

Vahid Raissi Dehkordi

Di Lin

Amir Naghdinezhad

Leila Pishdad



Situation within hSITE

- Task 2.2.2: Advanced Compression and Fidelity/Rate Modeling for Resource Allocation
 - Goal: source signal processing to allow for the efficient allocation of resources to transmit signals over a clinical network, characterized by highly time varying bandwidth and sudden changes in allocated bandwidths to low priority signals (such as e.g. video)



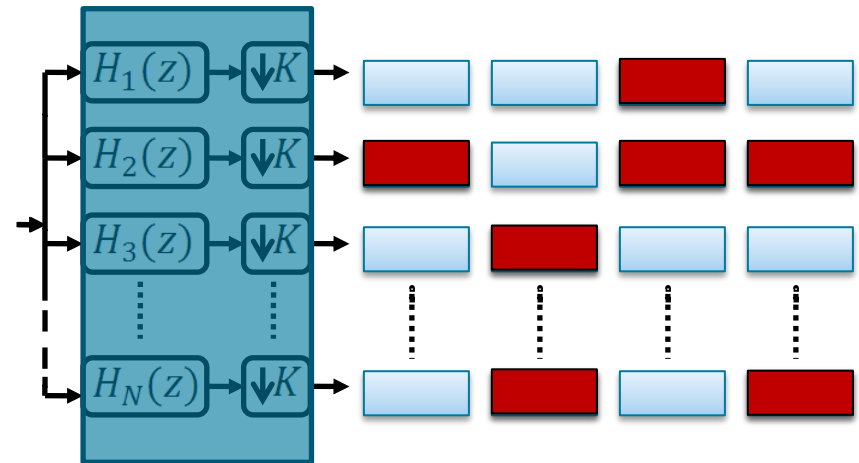
Overview of motivation

- In hospital network with transmission of
 - Medical information
 - Real time communications
 - Monitoring Signals
 - Other Data
 - Commercial services
- Requires agile
 - Compression mechanisms
 - Resource allocation mechanisms



Graceful Degradation Compression

- Goal:
 - Create new compression tools that allow graceful degradation

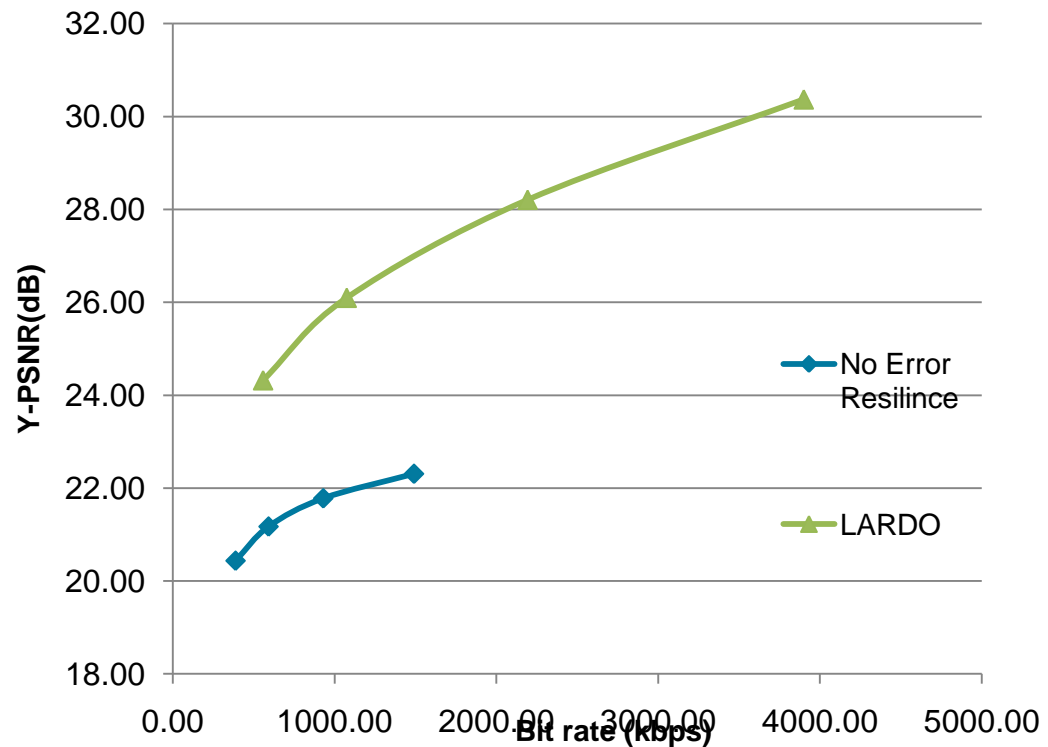


- Results:
 - Designs that allow arbitrary rate changes
 - Designs for code puncturing



Scalable video coding

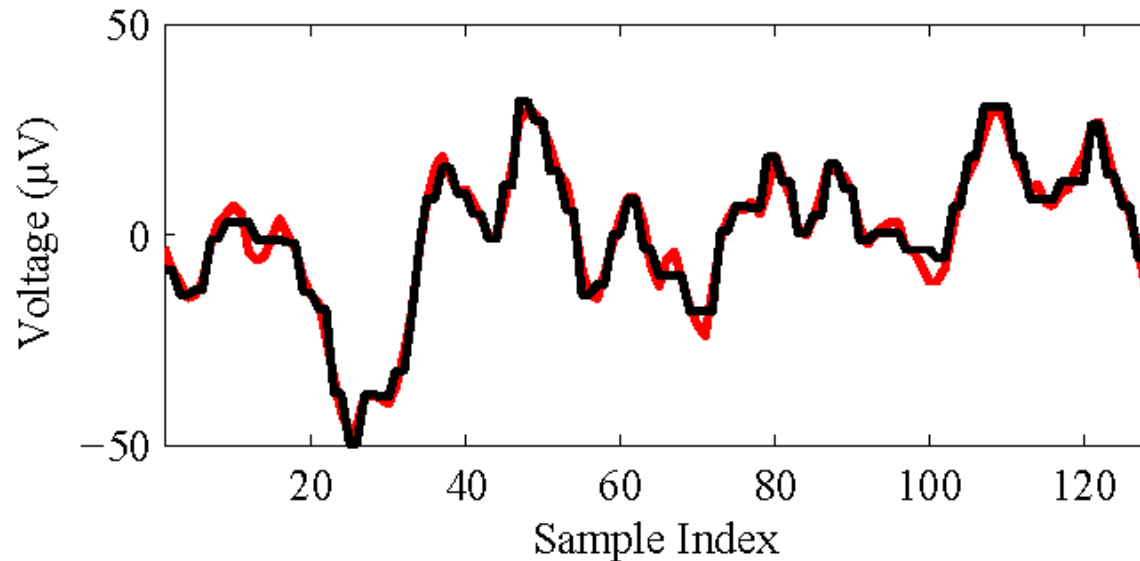
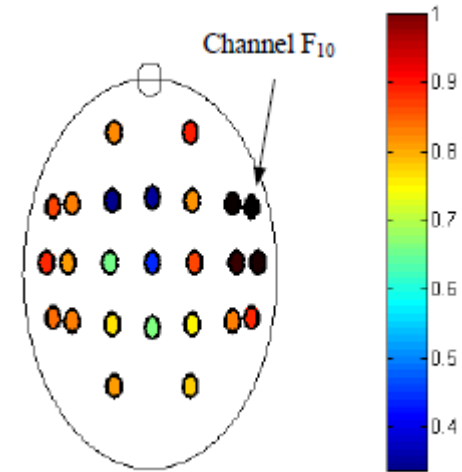
- Error resilience within scalable video coding





EEG Coding

- Embedded coding
- Temporal list-based redundancy removal
 - Hope to detect events





Resource Allocation

- Bandwidth allocation using patient flow models and data production models
- Taking into account
 - Patient flow
 - Data priorities
 - Imperfect CSI
 - ...

