

## **Research project for ENGN6612 Tutorial A**

### **Title**

Study of audio and video compression standards for digital TV

### **Group members**

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### **Description**

Digital Television is the next evolution of Television which is using digital modulation and compression to broadcast video, audio and data signals to television sets. This paper will firstly introduce the evolution of digital TV and its main technical features. Later we will focus study on one important composition of digital-video and audio compression. Related technology and standards including MPEG-2 and MPEG-4 will be investigated intensively. This investigation is proposed to get us a better understanding of DSPC application in audio and video compression and digital TV.

### **Context**

MPEG audio compression and MPEG-2 video compression are mature standards for digital TV. Basically, MPEG audio compression is using redundancy and irrelevancy reduction in order to compress the 1.5Mb data to between about 100kbit/s and 400kbit/s. MPEG-2 video compression is using redundancy and irrelevancy reduction in order to compress the 270Mb data to between about 2Mbit/s and 6Mbit/s. MPEG-4, a newly-developed standard, can provide better compression performance than previous standards.

### **Aims**

1. Introduce the evolution of digital TV
2. Compare digital TV with analogue TV in terms of technical differences
3. Decompose digital TV into functional block diagram
4. Review the technology and standards in digital audio/video compression
5. Research core standards of MPEG-2 and MPEG-4
6. Discuss what DSPC applications and how they are implemented in MPEG standards.

### **Group responsibilities**

Every group member will play the equally important role in the work of the paper. We will work together on data collection, technical research, writing and presentation. So everyone will have the same responsibilities in this group.