2.1 QUIZ QUESTION 1 (1/1 point)

Which of the following statements is/are true:

- [ ] Channel coding reduces the number of bits required to transmit a signal.
- [x] The proper choice of a source coding algorithm depends upon the properties of what is to be encoded. ✔
- [x] Source coding is also known as compression. ✔
- [ ] Lossy compression reduces the effects of bit errors.

✔

Note: Make sure you select all of the correct options—there may be more than one!

EXPLANATION

i. Channel coding adds redundancy (extra bits) to enable errors to be detected and possibly corrected.

ii. Source coding schemes compress information by reducing redundancy in the source data or by removing parts of the source data that are not noticeable.

iii. Source coding reduces the number of bits needed to transmit a signal and is also called compression.

iv. Compression (source coding) can not help to reduce the effect of bit errors introduced by the channel. That is the role of channel coding.

You have used 2 of 2 submissions

tutorials

2.1 QUIZ QUESTION 2 (1/1 point)

Which one of the following file formats is an example of lossless compression?

- WMV
- DOCX ✔
- MP3
- JPG

EXPLANATION

WMV, MP3 and JPG are all lossy compression algorithms. They are used for content that is intended for our eyes and ears, such as video (WMV), audio (MP3) and images (JPG). These algorithms achieve high compression rates by throwing away (not encoding) parts of the source data that are not noticeable to us, due to the way in which we see and hear things.

On the other hand, the DOCX file format is used by Microsoft WORD for text documents. In this case, we do not want the final text document seen by a recipient to have any differences at all from the one in which we originally created. It turns out that a DOCX file is actually a zipped file. To see this, you can take a copy of a DOCX file you are working on, and rename it as test.zip. If you browse this file, you will see a directory structure containing the contents of your document. This can be very useful if you want to extract images in their native format from the DOCX file. The same is true for other files created by MS Office.

You have used 1 of 2 submissions