

HKUSTx: ELEC1200.2x A System View of Communications: From Signals to...

- Pre-course Materials
- ▶ Topic 1: Course Overview
- ▶ Topic 2: Lossless Source Coding: Hamming Codes
- ▶ Topic 3: The Frequency Domain
- ▶ Topic 4: Lossy **Source Coding**
- ▶ Topic 5: Filters and the Frequency Response
- ▶ Topic 6: The Discrete Fourier Transform
- ▶ Topic 7: Signal Transmission -Modulation
- ▶ Topic 8: Signal Transmission -Demodulation
- ▶ Topic 9: IQ

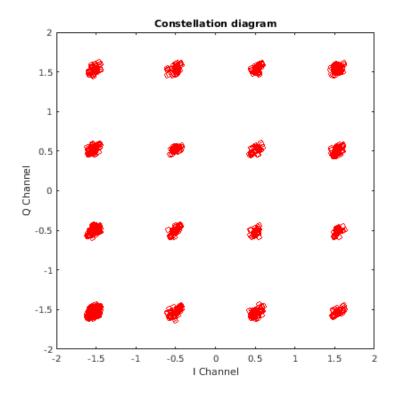
GENERIC MATLAB SANDBOX

Here is a blank script for you to build your own communication system. This is an optional task and will not be graded. You can try to call any functions introduced by previously expired lab tasks.

```
68
69 for c=1:NMSG
70
      % compare the messages
      disp(['Original Message ' num2str(c) ' :']);
71
72
      disp(textmsg{c});
73
      disp(['Recovered Message ' num2str(c) ' :']);
      % filter non-printing characters
74
      filtmsg = char(32*ones(size(msg{c})));
75
      ind = find(((msg{c}>31) & (msg{c}<127)) | (msg{c}>8) &(msg
76
77
      filtmsg(ind) = msg{c}(ind);
78
      disp(filtmsg);
      disp(['Number of Bit Errors: ' num2str(sum(textmsg{c}~=msg{__
79
      disp(' ')
80
81 end
82
83
```

Unanswered

Figure 1



Modulation

- ▶ Topic 10: Summary and Review
- Final Exam
- MATLAB download and tutorials
- ▼ MATLAB Sandbox

MATLAB Sandbox

Lab 1 Sandbox

Lab 2 Sandbox

Lab 3 Sandbox

Lab 4 Sandbox

Lab 5 Sandbox

Post Course Survey

Original Message 1:

It was the best of times, it was the worst of times.

It was the age of wisdom, it was the age of foolishness.

It was the epoch of belief.

Recovered Message 1:

It was the best of times, it was the worst of times.

It was the age of wisdom, it was the age of foolishness.

It was the epoch of belief.

Number of Bit Errors: 0

Original Message 2:

It was the season of Light, it was the season of Darkness.

It was the spring of hope, it was the winter of despair.

It was the epoch of incredulity.

Recovered Message 2:

It was the season of Light, it was the season of Darkness.

It was the spring of hope, it was the winter of despair.

It was the epoch of incredulity.

Number of Bit Errors: 0

Original Message 3:

We barely remember who or what came before this precious moment

We are choosing to be here right now

Hold on, stay inside... (Tool, Parabola)

Recovered Message 3:

We barely remember who or what came before this precious moment

We are choosing to be here right now

Hold on, stay inside... (Tool, Parabola)

Number of Bit Errors: 0

Original Message 4:

Bosco Cappuccio, Ha un declivio verde, Come una dolce, Poltrona Appisolarmi la, Solo, In un caffe remoto, Con una luce fievole, Come questa, Di questa luna.

Recovered Message 4:

Bosco Cappuccio, Ha un declivio verde, Come una dolce, Poltrona Appisolarmi la, Solo, In un caffe remoto, Con una luce fievole,

Come questa, Di questa luna.

Number of Bit Errors: 0

Run Code

© All Rights Reserved



© edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.

















