

Capstone Jeopardy

Chapter 5 Secret Bits	Chapter 6 Balance Toppled	Chapter 7 You Can't Say That on the Internet	Chapter 8 Bits in the Air	Chapter 4 Needles in the Haystack
<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>30</u>	<u>30</u>	<u>30</u>	<u>30</u>	<u>30</u>
<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>

Secret Bits for 10

The Caesar cipher is a simple encryption scheme that is broken by determining what?



Secret Bits for 10 Answer:

Knowing the alphabet and determining
The shift amount



Secret Bits for 20 points

A substitution cipher is fairly easy to break using what technique(s)?



Secret Bits for 20 Answer:

Substitution ciphers are broken by using:

- Frequency analysis of symbols
- Determining repeated symbols
- One letter words, etc



Secret Bits for 30 points

The *one-time pad* technique **CANNOT** be broken by cryptanalysis.

Why don't we use it for secure computer communication?



Secret Bits for 30 points Answer:

Distributing the one-time pad between Alice and Bob secretly is as hard as distributing the message since:

- One-time pad can only be used once, and
- Must be as “long” as the message



Secret Bits for 40 points

In the RSA algorithm both Alice and Bob have a Public key and a private key (Alice: A and a ; Bob: B and b).

Describe the steps needed for Alice to encrypt a message and Bob to decrypt the message.



Secret Bits for 40 Answer:

- 1) Alice gets Bob's Public key B (from a directory or requests it)
- 2) Encrypts the message using the RSA algorithm with B as the key
- 3) Alice sends and Bob receives the encrypted message
- 4) Bob decrypts the message back to plaintext by using the RSA algorithm with b as the key



Secret Bits for 50 points

When Alice sends Bob an encrypted message via email, what part(s) of the IP packet are still in plaintext?



Secret Bits for 50 Answer:

Everything, but the “data” of the IP packet is still in plaintext, so all the following information “leaks”:

- Sender’s IP address
- Receiver’s IP address
- Type of Service, etc



Balanced Toppled for 10 points

Who is the RIAA and why did they sue 26,000 individuals for millions of dollars?



Balanced Toppled for 10 points Answer

Recording Industry Association of America (RIAA) sued \$750 for each illegal song download.



Balanced Toppled for 20 points

What are the two kinds of secondary copyright infringement?



Balanced Toppled for 20 points Answer:

1) contributory infringement – knowingly providing tools that enable others to infringe

2) vicarious infringement – profiting from the infringement of others that one is in a position to control, and not prevent



Napster found guilty of both

Balanced Toppled for 30 points

What was Grokster's defense in its lawsuit by RIAA?



Balanced Toppled for 30 points Answer:

It's decentralized file-sharing system had other uses besides music-sharing so the Sony v. Universal Studio (MPAA) “safe Harbor” ruling should apply.



Balanced Toppled for 40 points

How does a Digital Rights Management (DRM) system of an electronic textbook assert control beyond the bounds of the paper textbook copyright law?



Balanced Toppled for 40 points Answers

It might expire, limit the number of times
read, block loaning or giving it to a friend,
“phone home” (the publisher) to track your
usage



Balanced Toppled for 50 points

What is a music watermarking and what year did the “major music labels” stop using them?



Balanced Toppled for 50 points Answer

Watermark – information embedded in the music that identified the original buyer so they could be held accountable for sharing.

In 2008, but Apple iTunes and Universal



Music Group in 2007

You Can't Say That for 10 points

Was the Deleting Online Predators Act (DOPA) ever passed into law?



You Can't Say That for 10 points Answer

No



You Can't Say That for 20 points

Why was Cubby's (start-up Shuttlebut service) lawsuit against CompuServe (Rumorville) denied?



You Can't Say That for 20 points Answer

CompuServe was judged to be more like a distributor since they did not edit Rumorville's defamatory statements against Cubby's Skuttlegut service



You Can't Say That for 30 points

Why was Stratton Oakmont's lawsuit against Prodigy successful?



You Can't Say That for 30 points Answer

Prodigy was ruled to be more like a publisher than a distributor since it claimed to edit content to be family-friendly.



You Can't Say That for 40 points

Why was the CDA (Comm. Decency Act of 1996) past into law, and why was its “display provisions” (making offensive images to under 18-year olds a crime) struck down?



You Can't Say That for 40 points Answer

The tradition Miller Test applied to
“obscene” material, but what does
“offensive” mean???



You Can't Say That for 50 points

Why can't the Internet be more like a Magazine store with respect to material harmful to minors?



You Can't Say That for 50 points Answer

The first amendment and hard to verify age
on the Internet



Bits in the Air for 10 points

What's the rationale for the Radio Act of 1927's nationalization of the frequency spectrum?



Bits in the Air for 10 Answer

The spectrum is a scarce resource that the government must manage



Bits in the Air for 20 points

How is channel capacity effected by the bandwidth **and** signal power?



Bits in the Air for 20 points Answer

Channel capacity grows linear with bandwidth, but only logarithmically with power (need to double the power to send one more bit at a time).



Bits in the Air for 30 points

What is meant by the “silo” organization of the legal structure?



Bits in the Air for 30 points Answer

Not the layer approach like in the Internet,
But radio from top-layer to bottom, etc.



Bits in the Air for 40 points

What President caused CNN to be fined \$325,000 for saying the word “shit”?



Bits in the Air for 40 points Answer

George Bush in 2006. CNN cable network aired Bush's "accidental" microphone comments on the air.



Bits in the Air for 50 points

Who is Michael Marcus and how has he changed our lives”?



Bits in the Air for 50 points Answer

Got the FCC to regulate a low-power transmission band that enabled spread spectrum technology used in WiFi and cell phones.



Needles in the Haystack for 10 points

What make the early Internet more like a library?



Needles in the Haystack for 10 points Answer

Universities and Big Businesses mostly posted information which was organized by categories



Needles in the Haystack for 20 points

In the following search engine steps, where is the dividing line between the *background* vs. the *foreground* steps?

1. Gather information
2. Keep copies
3. Build an index
4. Understand the query
5. Determine the relevance of each possible result to the query
6. Determine the ranking of the relevant results
7. Present the results



Needles in the Haystack for 20 points

The dividing line between the *background*
vs. the *foreground* steps:

1. Gather information
2. Keep copies
3. Build an index

4. Understand the query
5. Determine the relevance of each possible result to the query
6. Determine the ranking of the relevant results
7. Present the results



Needles in the Haystack for 30 points

What's the difference between a sponsored and an “organic” search result?



Needles in the Haystack for 30 points Answer

A sponsored search result is pay-for-placement advertisement while an “organic” search result is one found through the search engines normal process



Needles in the Haystack for 40 points

Why do search engines track individual search histories?



Needles in the Haystack for 40 points Answer

Search engines track an individual's search history because knowing about you can improve your search quality. USA PATRIOT Act requires search engine provides to provide search history under certain circumstances.



Needles in the Haystack for 50 points

What percentage of the Chinese version of Google on 10,000 English test words resulted in censored responses?



Needles in the Haystack for 50 points Answer

9% of the responses were censored

