

## NETWORK INDUSTRIES

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1. You should read the instructions, the entire exam and all of the questions before answering any of the questions.
2. Place your examination number on each page.
3. This is an open-book (but not open network), three-hour in-class examination. You may consult any materials you wish, except that (i) you may not consult anyone else and (ii) you may not use the Internet or any database service (such as Westlaw or Lexis/Nexis). Please do not discuss the exam with anyone until the examination period is over.
4. This examination consists of 3 pages. Please make sure that you have all of the pages.
5. There are 3 questions, with a total of 10 units for weighting purposes for grading. Each question consists of 1 to 4 units and the weight for the question is set forth next to the question.
6. While the questions address an integrated set of facts, I grade each question separately, so you should not cross reference answers across questions.
7. **Exam answers are to be word processed or typed and must be DOUBLE-SPACED. Please begin your answer to each question on a new page.**
8. **Your answer should be no more than 3000 words (approx. 300 words per unit).** Please provide a word count at the end of the exam.
9. Answers should be written in full English sentences and should refer to specific statute sections and cases where relevant. If an exam question is unclear, point out the ambiguity and then answer the question to the best of your ability.
10. Good luck.

It is the year 1865 and the United States civil war has just ended. The dominant means of rapid long-distance communication is the telegraph. There are three main privately-owned telegraph firms: Western Union, with roughly 44,000 miles of telegraph lines; the American, with 22,000 miles; and the United States, with 16,000 miles (the “Big Three”). Together, the American and the United States came close to approximating the geographic reach of Western Union, but obviously separately neither firm has the comprehensive reach of Western Union.

Unsurprisingly, the details of the telegraph system matters. A person or firm who wants to send a message via telegraph needs to deliver that message to the local office of the telegraph firm sending the message. The message itself needs to be translated from English into a telegraph code. The message is then transmitted along the telegraph wires. That produces a physical piece of paper on the receiving end with the message again encoded in the telegraph code. That message can be retranslated back into English or can be left as is. The message could be picked up at the local office of the receiving station or delivered. Each of these five services—delivery to the sending station; translation to code; transmission; retranslation to English; and delivery (or nondelivery) by the receiving station—is a separate function and may be priced separately.

### **Question 1 (3 units)**

Given the geographic reach among the Big Three, there are four standard market patterns: (1) many locales have no direct telegraph service (typically small towns and rural areas); (2) some areas are reached only by Western Union; (3) some have two providers (Western Union and either the American or the United States); and (4) big cities have all three providers.

Under its Western Union Complete (“WUC”) program, in any area with a local Western Union office, Western Union has a policy of doing its own local delivery of telegraph messages, though it does allow customers to pick up messages directly at the local receiving station. It does not allow those customers to contract with alternative local delivery services. In contrast, in cities in which both the American and the United States are present, they share a local delivery system and they also allow customers to contract with competing local delivery services.

**Question:** Discuss.



### **Question 2 (3 units)**

Western Union recently announced that it is introducing a new coding system for telegraph messages. Old-fashioned Morse Code has had a good

run, but it is time for a modern coding system, which it is calling Western Union Standard ("WUS"). For a two-year period, Western Union will send and receive messages in either Morse or WUS, but it will always send WUS messages first when it has both WUS and Morse messages to be sent. After the two-year transition, Western Union plans to send messages only in WUS. Sending signals in WUS relies heavily on a new technology and Western Union holds the patent on that technology. Absent access to the patented technology, the American and the United States will be unable to send messages in WUS.

**Question:** Discuss.



### Question 3 (4 units)

As you might imagine, telegraph lines tends to run between areas of relatively dense populations. Smaller cities and towns and rural areas generally are not reached directly by the telegraph. Telegraph messages for anyone in such a community will typically be sent to the nearest directly-served community and then are physically delivered

The US Congress is considering possible legislation to change that. The proposed bill has four key components:

1. The federal government will provide matching funds for any community that does not have a local station from one of the Big Three telegraph firms. Those funds can be used to establish a municipal local receiving station and to construct a connecting line to the closest telegraph line of a Big Three firm.
2. Big Three firms will have a duty to interconnect and provide transmission service to any such new municipal line.
3. The interconnecting firm can charge no more for transmission than its average charge for transmission on non-municipal lines for comparable distances.
4. Railroads and other firms that provide contractual access to facilities and rights-of-way to allow Big Three firms to enable them to install telegraph wire will have a duty to provide comparable access for federal-match municipal wires on terms comparable to those provided to Big Three firms for non-federal-match wires.

**Question:** Discuss.

