

Patent Law
Spring 2016
Prof. Ford

Take-Home Final Exam

This take-home final exam is worth 60% of your course grade. It will be administered on Monday, May 9, 2016. You have eight hours to complete the exam (or twelve hours if you have been granted an accommodation by the Registrar's Office). At the conclusion of the exam, responses must be emailed to the Registrar's Office at registrar@law.unh.edu.

Please do not put your name or any identifying information on your exam. Place only your assigned exam number on the top right corner of your answers.

Please format your responses similarly to this document: **single-spaced, with 1.5-inch margins, and empty space between paragraphs.** Use 12-point Cambria, Century, Constantia, or Book Antiqua; do *not* use Times New Roman. Number your pages. I recommend you submit your answers as a PDF file.

You may consult **any existing material you wish** while completing this exam. This specifically includes online research tools like Google and Lexis, though I do not recommend relying heavily on such tools. Answers discussing cases, doctrine, or principles that were not assigned or discussed in this course will receive no credit. **You must write your entire response, yourself, during the exam period; you may not paste any previously written material into your answers,** whether written by you or anyone else. **You may not discuss the exam with anyone while it is being administered,** including other students, attorneys, or participants on online discussion boards. Please type the following at the top of your exam:

I affirm that I have not discussed this exam with other students or anyone else during its administration.

This exam consists of **ten short-answer questions**, each worth 10% of the grade. **There is a total word limit of 3,000 words for your entire exam.** This is a generous limit; you do not need to use this many words, and concise and well-organized responses will be rewarded. There is no need to include the questions in your responses. **Please list your word count at the end of your exam.**

If any of the questions are unclear, or don't provide necessary information, state explicitly any assumptions you make and explain how your answer depends on those assumptions.

Good luck and have a wonderful summer!

The following scenario applies to all questions:

Israel Carrero filed a patent application for a “toy stuffed animal with remote video and audio capability.” (This is a real patent application, but I have changed the facts for this exam. Please rely on the scenario given here, not the actual patent application.) The abstract described the invention as follows:

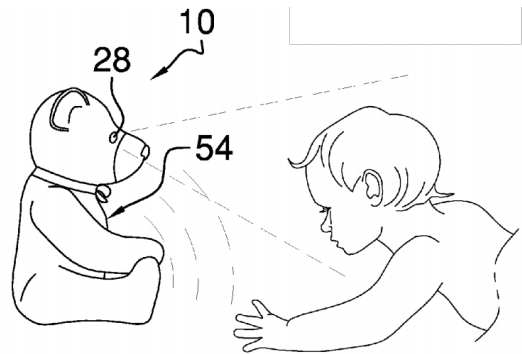


FIG. 4

A toy stuffed animal with remote video and audio capability that includes a camera configured to capture video data through at least one eye, a first microphone disposed within the toy configured to capture audio data emitted near the toy, and a first transmitter in wireless communication with a second receiver disposed within a handheld communicator, wherein video and audio data captured from scenes near the toy are wirelessly communicable to the communicator and remotely playable thereon by means of a display and a second speaker, respectively, whereby depression of a talk button upon the communicator enables transmission of audio signals received through a second microphone and relayed through a second transmitter in the communicator back to a first receiver in the toy, whereby said signals are playable upon a first speaker disposed within the toy so that the toy appears to speak sensibly and intelligently in response to stimuli.

The invention is shown in the figures of Carrero’s patent application, three of which are shown on this page.

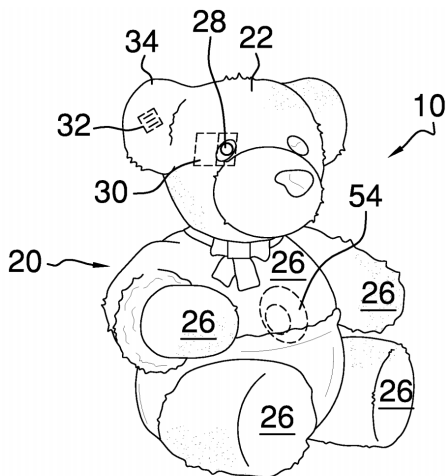


FIG. 1

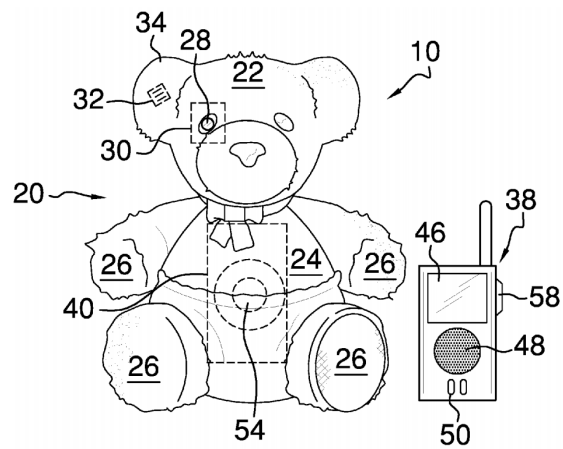


FIG. 3

The application contained the following written description, all of which was unchanged during prosecution and became part of the patent's specification:

The present invention provides a toy stuffed animal with remote video and audio capability. The invention employs a toy stuffed animal with embedded camera and microphone components to capture video and audio originating near the toy stuffed animal and an embedded transmitter to transmit captured video and audio to a receiver embedded in a handheld communicator.

The invention further employs a handheld communicator to receive video and audio communicated by the transmitter. The invention further employs a second microphone incorporated into the handheld communicator to capture audio originating near the handheld communicator and a receiver and speaker embedded in the toy stuffed animal to receive and play audio captured by the handheld communicator.

It is an object of this invention to provide a toy stuffed animal with remote video and audio capability to enable remote communication with a child playing with, or situated near, the toy. The toy stuffed animal with remote video and audio capability has been devised to wirelessly relay video and audio data captured near the toy to a handheld communicator, where said data is playable. A person operating the handheld communicator may respond to received audio and video data, and send audio signals wirelessly back to the toy stuffed animal so that a first speaker disposed within the toy relays the sounds to the child. The effect is that the toy itself is talking intelligently.

The present invention enables a parent to talk to and interact with a child through a toy stuffed animal **10** while said child plays with the toy. The present toy stuffed animal with remote video and audio capability **10** is configured to wirelessly relay video and audio data captured near the toy **10** to a remote handheld communicator **38**, through which communicator **38** an operator may likewise wirelessly transmit audio signals back to the toy **10**, as desired.

The toy stuffed animal with remote video and audio capability **10** includes a stuffed animal body **20**. In the preferred embodiment herein disclosed, the toy stuffed animal body **20** resembles a bear. The body **20** includes a head **22**, a torso **24**, and a plurality of limbs **26**, however other bodies, with or without limbs, or other extremities, and resembling other animals or characters, are considered as part of the

invention. At least one eye 28 is disposed upon the head 22. A camera 30 is disposed interiorly within the body 20 configured to capture video data through the at least one eye 28.

A first microphone 32 is interiorly disposed within the body 20. The microphone 32 is configured to capture audio data issued near the body 20. In the preferred embodiment herein disclosed the microphone 32 is disposed within an ear 34 of the toy stuffed animal 10. The first microphone 32 is configured to receive audio data issued near the toy stuffed animal with remote video and audio capability 10.

A first transmitter 36 is disposed within the body 20. The first transmitter 36 is configured to wirelessly relay the video and audio data captured near the toy stuffed animal with remote video and audio capability 10 to a remotely situated handheld communicator 38. To power the toy stuffed animal with remote video and audio capability 10, a first battery pack 40 is included disposed interiorly within the torso 24. The first battery pack 40 is accessible through the torso 24.

Video and audio data is thus wirelessly transmitted to the handheld communicator 38, whereat a parent, or other person (the "operator"), may witness video data captured by the camera 30 and hear audio captured by the first microphone 32 in real time. The operator of the handheld communicator 38 may then respond orally to said video and audio data, which response is transmitted as audio signals to a first receiver 42 in the toy 10 as will be described subsequently.

The communicator 38 includes a second receiver 44 configured to receive the wireless audio and video data, a display 46 upon which said video data is playable, and a second speaker 48 configured to transmit said audio data, to enable the operator to see and hear scenes near the toy 10. A second microphone 50 is included, the second microphone 50 able to receive audio signals issued nearby and a second transmitter 52 in the communicator is configured to relay said audio signals to the first receiver 42 where said audio signals are playable by a first speaker 54 disposed within the toy stuffed animal 10 torso 24.

Thus a first person holding the handheld communicator 38 can see and hear a second person near the toy stuffed animal 10 body 20, whereby the first person may communicate wirelessly with said second person through the toy 10, as desired, by use of the handheld communicator 38.

The original application, filed on May 6, 2013, contained four claims:

1. A toy stuffed animal with video and audio capability comprising:
a stuffed animal body;
a camera configured to capture video data;
a microphone configured to capture audio data; and
a handheld communicator configured to receive said video and audio data and comprising a speaker to play said audio data and a display to play said video data.
2. The toy stuffed animal of claim 1, further comprising:
a second speaker;
in which said handheld communicator further comprises a second microphone configured to capture second audio data; and
in which said second speaker is configured to receive and play said second audio data.
3. The toy stuffed animal of claim 1, in which the body resembles a bear.
4. The toy stuffed animal of claim 1, in which the body resembles an animal selected from the set consisting of bear, dog, cat, and giraffe.

The patent issued on October 26, 2014 with five claims (differences underlined):

1. A toy stuffed animal with remote video and audio capability comprising:
a stuffed animal body;
a camera disposed within the body configured to capture video data;
a microphone disposed within the body configured to capture audio data; and
a handheld communicator configured to receive said video and audio data and comprising a speaker configured to play said audio data and a display configured to play said video data.
2. The toy stuffed animal of claim 1, further comprising:
a second speaker disposed within the body;
in which said handheld communicator further comprises a second microphone configured to capture second audio data; and
in which said second speaker is configured to receive and play said second audio data.

3. The toy stuffed animal of claim 1, in which the body is made of plush material and is configured to resemble a bear.
4. The toy stuffed animal of claim 1, in which the camera is situated within the animal's eye.
5. The toy stuffed animal of claim 2, in which the body further comprises a mouth configured to move as said second speaker plays said second audio data.

* * * * *

Question 1

Toys R Us, a popular retailer, sells a children's toy substantially similar to the embodiment described in the patent, except that the camera is located in the bear's nose, not its eye. The Toys R Us toy comes with a remote control that allows a parent to listen and watch the audio and video transmitted from the bear. The remote control also contains a microphone that allows a parent to speak to the child through a speaker contained in the bear's mouth. The toy also contains a small motor that causes the mouth to move as it plays sound.

Carrero sues Toys R Us for patent infringement. Assess the strength of the infringement argument for claim 3 and claim 4.

Question 2

Toys R Us asserts that some of the claims are invalid under 35 U.S.C. § 112 for failure to satisfy the written-description and enablement requirements. Assess these defenses for claim 4 and claim 5.

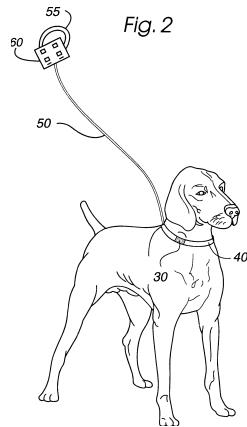
Question 3

Toys R Us also asserts that some of the claims are invalid for failure to claim patentable subject matter pursuant to 35 U.S.C. § 101, as interpreted in cases like *Alice Corp. v. CLS Bank*. Target claims that the patent claims trivial applications of the abstract idea of a talking stuffed animal. Assess this defense for claim 1.

Question 4

Toys R Us also asserts that some of the claims are invalid under 35 U.S.C. § 103. Toys R Us points to several pieces of prior art, including:

- ▶ U.S. Patent No. 6,178,923 (shown below left), which claims a “system and method for making live animals appear to talk” that consists of a collar with embedded speaker and a leash with buttons to trigger the speaker to play prerecorded messages; and
- ▶ A commercial camera system (shown below right), designed to be worn on a dog’s collar and provide video from the dog’s perspective, which sends video to the owner’s cellphone via wifi.



Are these references relevant prior art for purposes of § 103? Explain.

Question 5

Carrera sells a toy substantially identical to the embodiment described and claimed in his patent. Toys R Us developed its product by purchasing the Carrera toy online and tearing it down to examine how it worked.

The Carrera toy was marked with Carrera’s patent number, so Toys R Us reviewed the patent and concluded, based on the advice of counsel embodied in an opinion letter, that claims 1, 2, 3, and 5 are likely invalid. Toys R Us decided that to avoid infringing claim 4, it would move the camera from the bear’s eye to its nose. It did not seek a legal opinion on infringement of claim 4.

A jury found that Toys R Us infringed claim 4 and awarded \$375,000 in lost-profit damages. (Toys R Us plans to appeal, but assume for this question that Toys R Us infringed claim 4.) Carrera asserts that Toys R Us’s infringement was willful and asks the court to triple the damages. How should the court rule?

Question 6

Target, another popular retailer, sells a home-security system in which a plush stuffed bear, with embedded camera and microphone, transmits audio and video data wirelessly via wifi to a smartphone app that can be viewed by the system user. Target's system is one-way: it sends audio and video from the bear to the app, but has no speaker and can't receive audio from the user. In the Target system, there are two cameras, one in each eye; this provides for better low-light vision and gives the user a three-dimensional view of the room.

Carrero sues Target for infringement. Assess the strength of the infringement argument for claim 4.

Question 7

Target also sells a separate add-on that attaches to the stuffed bear and adds two-way capabilities. The add-on plugs into an input/output port on bear's back. It consists of a plastic block, about the size of a deck of cards, containing a larger-capacity battery and a speaker. When a user installs the add-on, she can use the smartphone app to speak through the speaker to someone in the same room as the bear. The bear can also be configured to play audio automatically—for instance, to scare away a burglar—when it detects movement in the room.

Target does not sell the bear and the add-on together; each is a separate product. Assess Target's liability for infringing claim 2 by selling the add-on.

Question 8

Target asserts that the patent is invalid under 35 U.S.C. § 102. Target points to three pieces of prior art:

- ▶ the Carrero toy described in question 5, sold by a wholesale distributor in Ciudad Juárez, Mexico on June 15, 2012;
- ▶ the Carrero toy, sold at a Walmart retail store in Carlsbad, California on July 10, 2012; and
- ▶ the Toys R Us toy described in question 1, sold at a Toys R Us retail store in Phoenix, Arizona on October 1, 2012.

Assess this defense for claim 3.

Question 9

Target's system was designed by Monica Figuerrero, who filed a patent application on her invention. Claim 1 of her application reads:

1. A home security system comprising:
 - a stuffed animal body;
 - an audiovisual recorder incorporated into said stuffed animal body;
 - a radio transmitter incorporated into said stuffed animal body and configured to transmit audiovisual information recorded by said audiovisual recorder to a viewing device; and
 - a power source incorporated into said stuffed animal body and configured to provide power to said recorder and said transmitter.

Figuerrero's application was filed on June 12, 2013; she can prove an earlier invention date of August 3, 2012. Is the Carrero patent invalidating prior art to claim 1 of Figuerrero's application under 35 U.S.C. § 102? Explain.

Question 10

Figuerrero's specialty is security systems; she previously developed, and sold, various security systems with hidden cameras, including one, shown at the right, in which the hidden camera is embedded in a lightbulb and transmits audio and video to a user via wifi.

Figuerrero's patent attorney did not disclose the lightbulb camera system to the patent examiner. Figuerrero is concerned that this failure will render her patent unenforceable due to inequitable conduct. Her attorney assures her that because the lightbulb system does not include a stuffed animal, and because the system is powered by electricity from the lightbulb socket, not an embedded power source, there is no need to disclose it to the examiner.

Assess the attorney's argument and the risk that a court would find the patent unenforceable.

