

- I. Hypothetical 1 Medical Diagnostics (Adapted from *Ariosa Diagnostics*, *Inc. v. Sequenom, Inc.* (Fed. Cir. 2015))
  - A. Ariosa Diagnostics v. Sequenom

## Claim:

- 1. A method for detecting the gender of a fetus, which method comprises,
- (a) obtaining a saliva sample from a pregnant female at least seven weeks after the beginning of the pregnancy;
- (b) separating the DNA of fetal origin from maternal DNA and cellular material in the saliva sample;
- (c) amplifying the fetal DNA using primers that are selective for Y chromosomal DNA and T7 RNA polymerase;
- (d) detecting the presence of amplified Y chromosomal DNA.

## Background:

In 1996, inventor Dr. Dennis Raincoat discovered that cell-free fetal DNA ("cffDNA") can be found in the saliva of a pregnant woman, in small quantities, as early as 7 weeks into pregnancy. cffDNA are short strands of DNA that are about 200 kb. These cffDNA's can be separated from the maternal cells and maternal DNA that can also be present in a mother's saliva. Recognizing that this discovery could enable early and convenient determination of a baby's gender, Dr. Raincoat sought to create an at-home test which could detect the presence of Y chromosomal DNA. Because fetal DNA is present in such small quantities in maternal saliva, Dr. Raincoat determined that it would have to be amplified to detect the presence of Y chromosomal DNA. Traditional techniques, such as PCR, however, required expensive equipment for amplification. Dr. Raincoat consulted with his colleague Dr. Brandywine, who recommended that Dr. Raincoat could amplify the Y chromosomal DNA at room temperature without special equipment using a newly discovered enzyme T7 RNA polymerase. Using this discovery, Drs. Raincoat and Brandywine developed the "Spitbaby" at-home test kit which parents could easily and quickly use to determine the gender of their baby in the privacy of their own homes. Millions are sold every year.



II. Hypothetical 2 – Computers (Adapted from Internet Patents Corporation v. Active Network, Inc. (Fed. Cir. 2015))

## Claim:

- 1. A method of providing an intelligent user interface to an online application on one or more devices comprising the steps of:
- (a) furnishing a plurality of icons on a web page displayed to a user of a web browser, wherein each of said icons is a hyperlink to a dynamically generated online application form set, wherein said web browser comprises Back and Forward navigation functionalities, and wherein said web browser can be utilized on multiple devices;
- (b) identifying the user of said web browser;
- (c) displaying said dynamically generated online application form set in response to the activation of said hyperlink, wherein said dynamically generated online application form set comprises a state determined by at least one user input;
- (d) determining whether the user had previously entered the user input to the form set on a web browser on the same or different device;
- (e) displaying said previous user input in the dynamically generated online application; and
- (f) maintaining said state upon the activation of another of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state.

## Background:

Websites are frequently used by companies to gather information from users in order to provide goods, services, or to provide additional information. Examples include gathering information to provide insurance quotes, or the collection of payment and address information for purchases. Customer frequently compare similar offerings from different websites, or access the same website on different devices, such as tablets, phones, and personal computers. This creates the problem where users have to reenter information when they use the same website application on different devices or switch between different websites. The present invention allows for users to enter data once into a given website and have that information retained such that the user does not have to reenter it when revisiting the website on different devices or when switching between websites on the same device.

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