

Patent Law

Prof. Roger Ford

Wednesday, November 15, 2017

Class 22 – Infringement: the geographic
scope of patent infringement

Recap

Recap

- Secondary liability / indirect infringement
- Divided / joint infringement
- Infringement of means-plus-function claims

Today's agenda

Today's agenda

- Introduction
- § 271 (a) and international activity
- § 271 (f) and export activity
- § 271 (g) and import activity

Introduction

Introduction

- In general, patent rights are territorial – they provide rights within the issuing country, but not outside that country
 - Paris Convention for the Protection of Intellectual Property (1883), Article 4bis: “Patents applied for in the various countries of the Union by nationals of countries of the Union shall be independent of patents obtained for the same invention in other countries....”

Introduction

- This is not a universal rule in American law
 - Worldwide taxation
 - Foreign Corrupt Practices Act
 - Various criminal laws – sex crimes, drug trafficking, copyright infringement

Introduction

- Any patent-acquisition strategy, then, needs to consider applications across a variety of countries
 - Patent Cooperation Treaty (1970)
 - WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) (1995)
 - European Patent Convention (1973) and EU unitary patent (2012)

Introduction

- On the infringement side, ordinary literal infringement is limited to activities in the United States
 - § 271(a): “makes, uses, offers to sell, or sells any patented invention, [within the United States](#) or imports [into the United States](#)”
- There are two statutory expansions, § 271(f) and § 271(g)

Introduction

- Also relevant: § 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, applies to some importations of patented products
- § 337 prohibits unfair trade practices, including the importation of a product that infringes a U.S. patent
 - § 337 only applies if there is a domestic industry that's harmed

**§ 271 (a) and
international activity**

(post-AIA) 35 U.S.C. § 271 — Infringement of Patent

(a) Except as otherwise provided in this title, whoever without authority **makes, uses, offers to sell, or sells any patented invention, within the United States** or **imports into the United States** any patented invention during the term of the patent therefor, infringes the patent.

* * *

§ 271 (a) and international activity

- So five kinds of direct infringement:
- making the invention in the United States
 - using the invention in the United States
 - offering the invention for sale in the United States
 - selling the invention in the United States
 - importing the invention into the United States

§ 271(a) and international activity

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 - importing the invention into the United States

NTP v. RIM

- Tech: System and method for email delivery to handheld devices
- Notably, the system and method involve a variety of geographically-distributed components

United States Patent [19]
Campana, Jr. et al.

[11] Patent Number: 5,436,960
[45] Date of Patent: Jul. 25, 1995

[54] ELECTRONIC MAIL SYSTEM WITH RF COMMUNICATIONS TO MOBILE PROCESSORS AND METHOD OF OPERATION THEREOF

[76] Inventors: Thomas J. Campana, Jr., 3836 W. 86th St., Chicago, Ill. 60652; Michael P. Ponselike, 212 Tans Dr., Lockport, Ill. 60441; Gary F. Thelen, 16 Fox La., Palos Park, Ill. 60464

[21] Appl. No.: 702,939
[22] Filed: May 20, 1991

[51] Int. Cl.⁴ H04M 11/00
[52] U.S. Cl. 379/58; 379/93
[58] Field of Search 379/58, 67, 88, 93, 379/96, 97, 98, 57; 364/222.2, 222.3, 284, 284.3, 284.4, 919.2

[56] References Cited

U.S. PATENT DOCUMENTS
4,644,351 2/1987 Zabarsky et al. 379/57 X
4,768,087 8/1988 Taub et al. 455/2 X
4,821,308 4/1989 Hashimoto 379/57
4,825,546 4/1989 Rosenberg 379/57
4,837,797 6/1989 Freeny, Jr. 379/96
4,845,628 7/1989 Gifford 364/919.2 X
4,875,039 10/1989 Astrom et al. 379/57 X
4,882,744 11/1989 Hashimoto 379/57
4,942,258 7/1990 Davis 379/57
4,961,216 10/1990 Baehr et al. 379/57
5,128,981 7/1992 Tsukamoto et al. 379/58

FOREIGN PATENT DOCUMENTS

63-209263 12/1988 Japan
1125049 5/1989 Japan

OTHER PUBLICATIONS

"X.400 Breeds Third Generation E-Mail Systems", Morris, J., TPT Mar. 1989, vol. 7, No. 3, pp. 54-57.
"Data Communications on Cellular—The Office of Tomorrow in Your Car Today", What Telephone & Comm. News, Oct. 1985, No. 14, pp. 28-31.
"Cellular Radio", Computer Law & Security Report, Jan. 1986, vol. 1, No. 5, pp. 18-19.

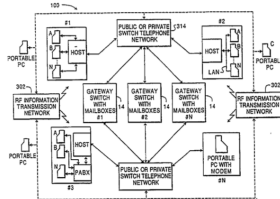
"More Power to the Pager", Today's Office (Jul. 1987), No. 7, pp. 16-17.
"Get Me Memphis Tennessee (Cellular Communications)", Micro Decision, May 1989, No. 95, pp. 50-54.
"Tele-laptop: Mobility as deciding competition feature (radio telephone & comp.)", Funktschaw, Dec. 1989, No. 26, pp. 35-36, 39.
"Electronic Mail Radio Pulse Shaper . . .", Revue Polytechnique, Dec. 1989, No. 12, pp. 1508-1510.
"Message Link", appearing in British Telecommunications Engineering, vol. 4, Jan. 1986, p. 202.
"Mobile Data Report" publication, vol. 3, No. 15, Apr. 22, 1991, pp. 1-12.

Primary Examiner—Dwayne D. Bost
Assistant Examiner—G. J. Dehling
Attorney, Agent, or Firm—Antonelli, Terry, Stout & Kraus

[57] ABSTRACT

A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system in accordance with the invention includes a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors, at least one interface switch, one of the at least one interface switch connecting the electronic mail system to the RF information transmission network. The originated information is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch and the originated information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information. The electronic mail system transmits other originated information within the electronic mail system through a telephone network.

89 Claims, 12 Drawing Sheets



U.S. Patent No. 5,436,960

→ "Electronic mail system with RF communications to mobile processors and method of operation thereof"

United States Patent [19]
Campana, Jr. et al.

[11] Patent Number: 5,436,960
[45] Date of Patent: Jul. 25, 1995

[54] ELECTRONIC MAIL SYSTEM WITH RF

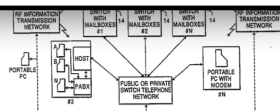
"More Power to the Pager", Today's Office (Jul. 1987),

1. A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

- at least one gateway switch in the electronic mail system, one of the at least one gateway switch receiving the originated information and storing the originated information prior to transmission of the originated information to the at least one of the plurality of destination processors;
- a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;
- at least one interface switch, one of the at least one interface switch connecting at least one of the at least one gateway switch to the RF information transmission network and transmitting the originated information received from the gateway switch to the RF information transmission network; and wherein

the originated information is transmitted to the one interface switch by the one gateway switch in response to an address of the one interface switch added to the originated information at the one of the plurality of originating processors or by the electronic mail system and the originated information is transmitted from the one interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information added at the originating processor, or by either the electronic mail system or the one interface switch; and

the electronic mail system transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a wireline without transmission using the RF information transmission network.



U.S. Patent No. 5,436,960



US005436960A

U.S. Patent No. 5,436,960

[54] ELECTRONIC MAIL SYSTEM WITH RF "More Power to the Pager", Today's Office (Jul. 1987).

1. A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

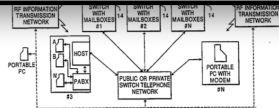
at least one gateway switch in the electronic mail system, one of the at least one gateway switch receiving the originated information and storing the originated information prior to transmission of the originated information to the at least one of the plurality of destination processors;

a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

at least one interface switch, one of the at least one interface switch connecting at least one of the at least one gateway switch to the RF information transmission network and transmitting the originated information received from the gateway switch to the RF information transmission network; and wherein

the originated information is transmitted to the one interface switch by the one gateway switch in response to an address of the one interface switch added to the originated information at the one of the plurality of originating processors or by the electronic mail system and the originated information is transmitted from the one interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information added at the originating processor, or by either the electronic mail system or the one interface switch; and

the electronic mail system transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a wireline without transmission using the RF information transmission network.



NTP v. RIM

→ Issue 1: So what does it mean to "use" a system with dispersed components?

- And when does that "use" occur in the United States?

NTP v. RIM

→ Issue 1: So what does it mean to “use” a system with dispersed components?

- And when does that “use” occur in the United States?
- Court: “the place at which the system as a whole is put into into service, *i.e.*, the place where control of the system is exercised and beneficial use of the system obtained.” (Nard 644)

NTP v. RIM

→ *Decca Ltd. v. United States*:

- Claimed invention: radio navigation system with three transmitters and a receiver that receives signals from the three transmitters to determine position
- One of the transmitters in the accused system was located in Norway

NTP v. RIM

→ *Decca Ltd. v. United States*:

- Court: "it is obvious that, although the Norwegian station is located on Norwegian soil, a navigator employing signals from that station is, in fact, 'using' the station and such use occurs wherever the signals are received and used in the manner claimed."

NTP v. RIM

→ **Persuasive?**

NTP v. RIM

→ Persuasive?

- Consistent with the statutory text: it's the verb (making, using, offering, selling, or importing) that must occur in the U.S.
- (Though we'll see an exception shortly)
- *Transocean v. Maersk* (Nard 648): An offer in the United States, where the patented invention wasn't actually delivered, is infringement (!)

NTP v. RIM

→ Persuasive?

- But maybe it's only reasonable for distributed systems
- What about a patented invention located entirely in a foreign country, but used remotely via the Internet? Would Congress intend such a system to fall within the scope of § 271(a)?

NTP v. RIM

- Issue 2: When does one “use” in the United States a method with dispersed steps?

NTP v. RIM

- Issue 2: When does one “use” in the United States a method with dispersed steps?
- “[T]he use of a process necessarily involves doing or performing each of the steps recited. This is unlike use of a system as a whole, in which the components are used collectively, not individually.” (Nard 645)
 - So every step has to be done in the U.S.

NTP v. RIM

→ Are these consistent?

NTP v. RIM

→ Are these consistent?

- No!
- System claim: The system doesn't have to be entirely in the U.S.; the "use" does
- Method claim: The method as a whole has to be entirely in the U.S.; the "use" being in the U.S. isn't enough

NTP v. RIM

- Issue 3: When does one “sell” or “offer to sell” a method, if the method is performed outside the U.S.?

NTP v. RIM

- Issue 3: When does one “sell” or “offer to sell” a method, if the method is performed outside the U.S.?
 - Answer: very rarely
 - Methods are not amenable to “sale,” which requires transfer of title to some sort of property
 - Note: this is much more limited than a “sale” for purposes of prior art

§ 271 (f) and export activity

(post-AIA) 35 U.S.C. § 271 — Infringement of Patent

* * * (f)

(1) Whoever without authority **supplies** or causes to be supplied in or from the United States **all or a substantial portion of the components of a patented invention**, where such components are uncombined in whole or in part, in such manner as **to actively induce the combination of such components outside of the United States in a manner that would infringe the patent** if such combination occurred within the United States, shall be liable as an infringer.

(2) Whoever without authority **supplies** or causes to be supplied in or from the United States **any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use**, where such component is uncombined in whole or in part, **knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe** the patent if such combination occurred within the United States, shall be liable as an infringer.

* * *

§ 271 (f) and export activity

- *Deepsouth Packing v. Laitram*:
- Laitram had a patent on a shrimp-deveining machine
 - Deepsouth made the components of the machine and sold them overseas
 - Supreme Court: this is not infringement
 - A decade later: Congress enacts § 271 (f) to reverse *Deepsouth*

§ 271 (f) and export activity

- **Should this be infringement?**

§ 271 (f) and export activity

→ Should this be infringement?

- Argument for it being infringement: Selling the machine is infringement, and this is economically the same
- Argument against: Patent law is territorial, and sales to customers outside the U.S. aren't really the U.S.'s concern – if they made and sold it outside the U.S., no infringement!

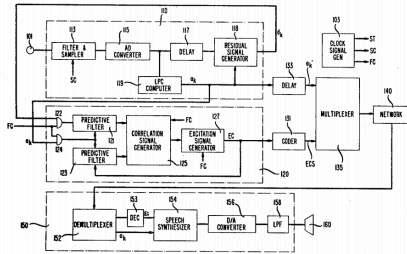
Microsoft v. AT&T

- So what's the outer edge of § 271 (f)?
- AT&T patent: an apparatus for digitally encoding and compressing recorded speech
 - Requires both hardware and software

United States Patent [19] Patent Number: 4,472,832
 Atal et al. [45] Date of Patent: Sep. 18, 1984

[54] DIGITAL SPEECH CODER [56] References Cited
 U.S. PATENT DOCUMENTS
 [75] Inventors: Bishnu S. Atal, New Providence; 3,624,302 11/1971 Atal 179/1
 Joel R. Remde, Elizabeth, both of 3,740,476 6/1973 Atal 179/1
 N.J. 4,130,729 12/1978 Gagnon 381/30
 4,133,976 1/1979 Atal et al. 179/1
 4,140,876 2/1979 Gagnon 381/33
 4,184,049 1/1980 Crochier et al. 381/37
 [73] Assignee: AT&T Bell Laboratories, Murray Hill, N.J.
 [21] Appl. No.: 326,371
 [22] Filed: Dec. 1, 1981
 [51] Int. Cl.³ G10L 1/00
 [52] U.S. Cl. 381/40; 364/513.5
 [58] Field of Search 381/29, 30, 31, 36,
 381/38, 33, 37; 364/513.5

39 Claims, 7 Drawing Figures



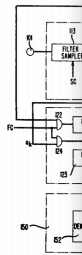
**U.S. Patent No.
 4,472,832
 (Reissue 32,580)**

→ "Digital
 speech
 coder"

United States Patent [19] Patent Number: 4,472,832
 Atal et al. [45] Date of Patent: Sep. 18, 1984

[54] DIGITAL SPEECH CO
 [75] Inventors: Bishnu S. A
 Joel R. Rem
 N.J.
 [73] Assignee: AT&T Bell
 Hill, N.J.
 [21] Appl. No.: 326,371
 [22] Filed: Dec. 1, 198
 [51] Int. Cl.³
 [52] U.S. Cl.
 [58] Field of Search

24. Apparatus for encoding a speech pattern comprising means for partitioning a speech pattern into successive time frames; means responsive to the frame speech pattern for generating for each frame a set of speech parameter signals; means responsive to said frame speech parameter signals and said frame speech pattern for generating a signal representative of the differences between said frame speech pattern and said frame speech parameter signal set; means responsive to said frame speech parameter signals and said differences representative signal for generating a first signal corresponding to said frame speech pattern; means responsive to said frame speech parameter signals for generating a second frame corresponding signal; means for generating a signal corresponding to the differences between said first and second frame corresponding signals; and means responsive to said frame differences corresponding signal for producing a third signal to modify said second signal to reduce the frame differences corresponding signal.



**U.S. Patent No.
 4,472,832
 (Reissue 32,580)**

Microsoft v. AT&T

- § 271(f) has subsections corresponding to the two kinds of secondary liability
 - § 271(f)(1): inducing the combination outside the United States (à la § 271(b))
 - § 271(f)(2): exporting a component “especially made or especially adapted” for infringement (à la § 271(c))
- Which one is at issue in *Microsoft*?

Microsoft v. AT&T

- So is software a “component” under § 271(f)?

Microsoft v. AT&T

→ So is software a “component” under § 271 (f)?

- Yes but only in its physical form – not as abstract code
- The Court takes a literal approach to “component” – physical inventions are made up of physical components that can be physically combined
- Reasonable?

Microsoft v. AT&T

→ Then what is required to “supply” software under § 271 (f)?

Microsoft v. AT&T

- Then what is required to “supply” software under § 271(f)?
 - Supplying a physical copy specific to each copy of the invention

Microsoft v. AT&T

- Why is AT&T targeting the master copy of Windows instead of just going after sales of computers in the U.S.?

Microsoft v. AT&T

- Why is AT&T targeting the master copy of Windows instead of just going after sales of computers in the U.S.?
- Because this lets them reach sales of computers outside the U.S.
 - But is that consistent with the purpose of § 271(f)?

Microsoft v. AT&T

- So is this outcome reasonable?

Microsoft v. AT&T

→ So is this outcome reasonable?

- Well, it avoids holding Microsoft liable for purely overseas sales
- But it creates a big asymmetry!
- If a company designs a novel machine and exports the pieces for sale and use overseas, it infringes
- If a company designs a novel piece of software and exports it for sale and use overseas, it doesn't infringe

§ 271 (g) and
import activity

(post-AIA) 35 U.S.C. § 271 — Infringement of Patent

* * *

(g) Whoever without authority **imports** into the United States or offers to sell, sells, or uses within the United States **a product which is made by a process patented in the United States** shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent. In an action for infringement of a process patent, no remedy may be granted for infringement on account of the noncommercial use or retail sale of a product unless there is no adequate remedy under this title for infringement on account of the importation or other use, offer to sell, or sale of that product. A product which is made by a patented process will, for purposes of this title, **not be considered to be so made after—**

- (1) it is **materially changed by subsequent processes**; or
- (2) it **becomes a trivial and nonessential component of another product**.

* * *

§ 271(g) and import activity

- § 271(f) applies only to product patents and exportation
- § 271(g) applies only to process patents and importation
 - If you import a product made by a patented process, that's infringement

§ 271(g) and import activity

→ What's the point of this provision?

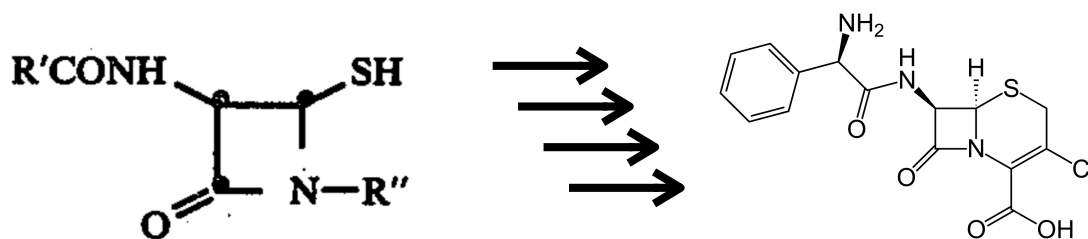
§ 271(g) and import activity

→ What's the point of this provision?

- If you manufacture and sell a product in the U.S., you infringe the process patent
- If you manufacture overseas and sell in the U.S., you wouldn't infringe without § 271(g)
- So without § 271(g), patent law would encourage manufacturing overseas

Eli Lilly v. American Cyanamid

- Patent: method of manufacturing Compound 6
- Compound 6: a chemical precursor to cefaclor, manufactured in Italy using the claimed process
- Four chemical transformations are needed to convert Compound 6 to cefaclor



Eli Lilly v. American Cyanamid

- So what sort of transformation is enough to avoid liability under § 271 (g)?

Eli Lilly v. American Cyanamid

- So what sort of transformation is enough to avoid liability under § 271(g)?
- Court: a change to “the physical or chemical properties of the product in a manner which changes the basic utility of the product”
 - Here, it changes it from a compound with no independent utility to one with antibiotic functionality

Eli Lilly v. American Cyanamid

- Eli Lilly’s argument: Compound 6 has no other purpose, so the transformation isn’t “material”
- Likewise, the dissent: Economically, Compound 6 and cefaclor are the same thing
 - **Persuasive?**

Next time

Next time

→ Remedies: injunctions