

Innovation and Intellectual Property, Practices to protect IP and to incentive its generation

Alessandro Orsi
Managing Counsel IP
IPG EMEA & APJ

Innovation vs. Invention

- A new way of doing something
 - Technical
 - Organisational
 - Commercial
- Generally: Invention is the first occurrence of an idea for a new product or process, while Innovation is a successful attempt to carry it out into practice
- However “patentable invention” is also a legal term which is defined by the applicable law.

Inventiones patentables

Son patentables las invenciones **nuevas**, que impliquen **actividad inventiva** y sean susceptibles de **aplicación industrial**, aun cuando tengan por objeto un producto que esté compuesto o que contenga materia biológica, o un procedimiento mediante el cual se produzca, transforme o utilice materia biológica

What is Intellectual Property?

- **Industrial Property** generally means technology and information protected under laws for patents, trademarks, and mask works.
- **Intellectual Property** means technology or information protected under laws for copyrights, trade secrets and other intellectual property laws. Often this definition includes industrial property as well (not under Spanish laws).

Intellectual Property: Breaking the Code

■ Concepts and Ideas

■ Trade Secrets

- A trade secret is information that
- not generally ascertainable
- is the subject of reasonable efforts to preserve confidentiality, and
- provides an economic benefit to the owner.

■ Patent

- A method or apparatus that is new, useful and not obvious to a person of ordinary skill in the art.

Intellectual Property: Breaking the Code

- Expression of the idea, but not the idea itself
 - Copyright
 - protects works that are original, creative and fixed in a medium
 - Maskwork
 - similar to copyright, but applies to semiconductor chip topologies
- Reputation and good will
 - Trade mark and trade name
 - Unfair competition
 - False advertising

IPR Characteristics in common

- Exclusive rights for commercial use of certain non-tangible things
- National rights enforceable through civil law
- Infringement can and does lead to
 - court orders preventing product sales
 - substantial damages
 - very costly and lengthy litigation
 - seizure of infringing products
- Can be licensed and sold separate from any physical object

Patents - What they are

- Limited monopoly granted in exchange for publication of technical invention

US005544175A

United States Patent [19] **Patent Number:** **5,544,175**
Posse [45] **Date of Patent:** **Aug. 6, 1996**

[54] **METHOD AND APPARATUS FOR THE CAPTURING AND CHARACTERIZATION OF HIGH-SPEED DIGITAL INFORMATION**
 [75] **Inventor:** Kenneth E. Posse, Fort Collins, Colo.
 [73] **Assignee:** Hewlett-Packard Company, Palo Alto, Calif.
 [21] **Appl. No.:** 213,783
 [22] **Filed:** Mar. 15, 1994
 [51] **Int. Cl.⁶** G01R 31/3143
 [52] **U.S. Cl.** 371/25.1; 371/22.1; 371/21.2; 371/21.4
 [58] **Field of Search** 364/486, 579; 324/73.1; 371/23.1; 6, 22.1, 21.1, 21.2, 4, 21.6; 326/93; 327/74, 76, 77, 81, 276

[56] **References Cited**
U.S. PATENT DOCUMENTS
 4,327,440 4/1982 Turaya et al. 371/6
 4,335,558 3/1984 Murray et al. 327/76
 4,438,404 3/1984 Philipp 328/63
 4,456,992 6/1984 Schaub 391/6
 4,495,621 11/1985 Nakagami et al. 371/6
 4,528,591 7/1985 Lique et al. 327/76
 4,797,621 1/1989 Anderson et al. 324/533
 4,817,013 3/1989 Koga 364/980
 4,819,981 4/1989 Velli et al. 328/134
 4,888,588 12/1989 Caragiuozzi 341/22
 4,965,800 10/1990 Puschbach 371/22.1
 5,056,094 10/1991 Whisell 371/25.1
 5,144,225 9/1992 Talbot et al. 374/73.1
 5,144,915 9/1992 Starr et al. 463/45
 5,173,906 12/1992 Dreibelbis et al. 371/25.1
 5,210,486 5/1993 Wilson et al. 324/238
 5,235,776 7/1993 Olson et al. 324/221
 5,238,067 7/1993 Bach 359/275

OTHER PUBLICATIONS
 5,305,820 4/1994 Sasahi 371/22.1
 5,315,599 5/1994 Chaboud et al. 371/25.1
 5,336,944 8/1994 Fischer 371/77

OTHER PUBLICATIONS
 Cable Testing With Time Domain Reflectometry, (Hewlett-Packard Application Note 67, Oct. 1965).
 Extending Frequency Range and Increasing Effective Sample Rate on the 3180A Waveform Recorder, (Hewlett-Packard Application Note 313-4).
 Model 1415A Time Domain Reflectometer (Hewlett-Packard Operating and Service manual, Apr. 1965).

Primary Examiner: Emanuel T. Wehler
Assistant Examiner: Hal D. Wachman

ABSTRACT
 A digital signal detector for sampling the state of a high speed digital signal occurring at a test node in a digital circuit which exhibits the same behavior with repeated applications of the same inputs. The digital signal detector samples the state of a test circuit node at discrete intervals in time and stores the digital levels with timing reference information. The stored information is then compared to the expected behavior of the tested node for analysis of delay-time and other parametric faults, such as performance faults. The digital signal detector includes a state discriminator which determines the state of the input digital signal by comparing its voltage level to one or more threshold voltages. The digital signal detector also includes a memory unit which stores the signal state information upon receipt of a memory strobe signal generated by a memory delay control circuit which delays the application of the memory strobe signal by a predetermined amount of time after the receipt of a clock pulse. The stored digital signal states can be later retrieved from the memory unit for evaluation of the input digital signal.

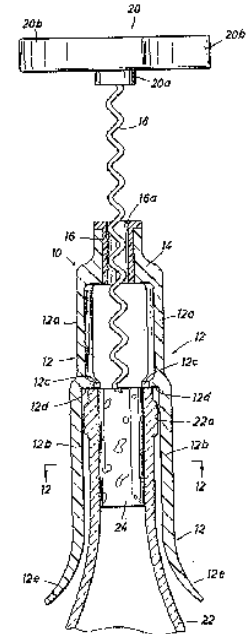
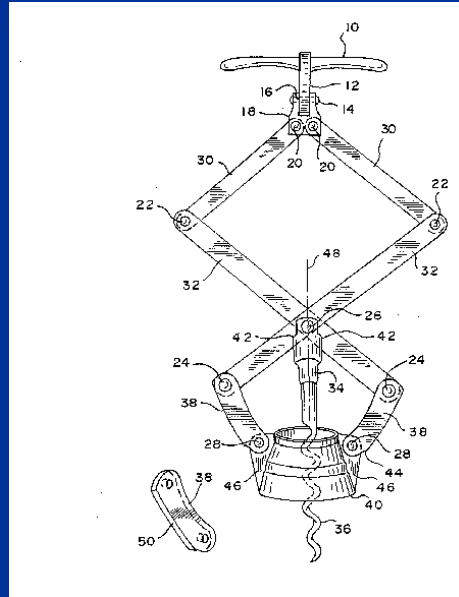
20 Claims, 7 Drawing Sheets

Patents - Characteristics

- Complex and expensive official registration process based on carefully written specification
- Subject to search and examination
- Specifications are published
- Max 20 year term
- Can be very valuable, but also very precarious
- Rights generally go to first to file, apart from US.

Patents - What is an invention

- Solution to a technical problem
- Must be
 - new
 - not obvious



Examples of Patents Include...

- Everyday products e.g. pens, staplers or diapers
- Hi-tech products
- E-commerce business method
- Telecom call management software
- Network management software
- Improvements on known processes or products
- New applications for existing processes or products

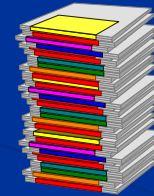
How to get a Patent

- Inventor/owner must apply for patent protection to receive it
- Formal application must be prepared and filed, in which you have to describe at least one way of **actually implementing** the invention
- **No additions** after the filing date

Copyrights - What they are

Right to prevent copying of original work

- books, films, music
- software
- drawings and artwork
- fonts
- icons
- databases
- photos
- most other things you might want to copy



Copyrights - characteristics

- automatically on creation of work
- There can be several copyrights in a single item
- They last a long time - at least 70 years after author's death.
- Independent creation of similar work is not infringement
- copyright Come into being notices advisable for indicating the existence and ownership of copyright



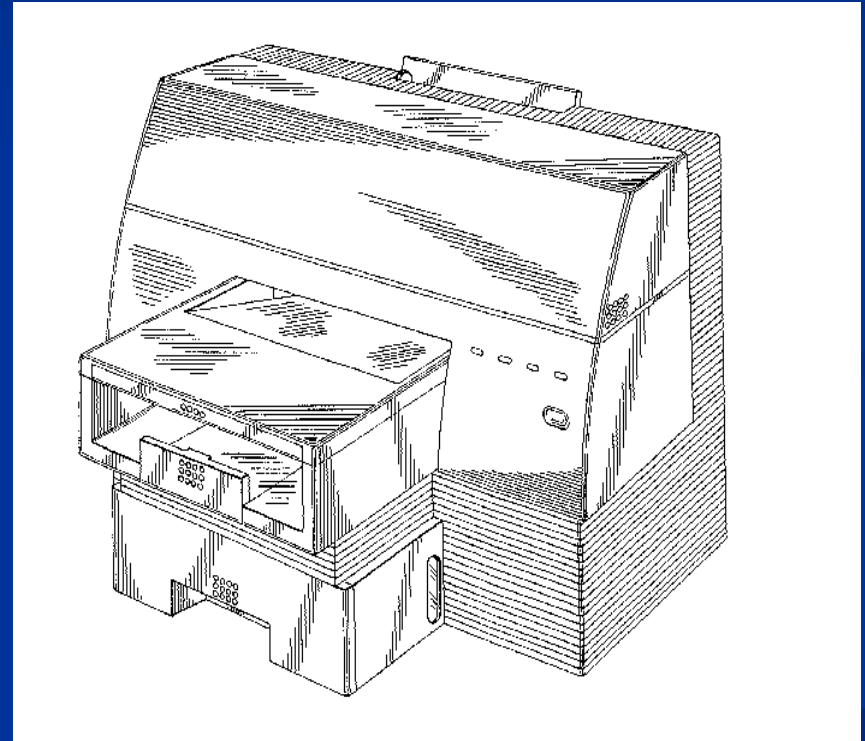
© 1992, 1997 Hewlett-Packard Development Company L.P.

Confidential Information

- Information which is valuable because it is not generally available
 - eg unpublished financial information, strategies, product plans, product prototypes, source code, interface definitions, inventions waiting to be patented etc.
- In general:
 - No-one owns information
 - No protection other than controlled access
 - If communicated to others, only protected by agreement

Registered Designs

- Protects aesthetic appearance of articles
- Registration process
- Last up to 25 years
- limited to specified products
- infringed by making and selling articles with the design applied
- elements whose form is dictated by function are not protected



Benefits and Challenges from IPR

Patents to protect R&D investments

- Reduced pressure from competition, thanks to product/feature “monopoly”
- Licensing schemes:
 - To enter into new territories
 - To exploit the patent in one/different fields/markets
 - To access to competitors’ patents/IP
- Increase company’s assets (well valued by stock advisers or banks)

Protection strategy

- Balance costs Vs. benefits
 - Manufacturing and distribution costs
 - Territory coverage (patents Vs. sales)
 - Competitor strategy (commercial and on IPR)

Incentives

What to incentive

- Production of Innovations (implementations)
- Generation of Inventions
 - What are company's objectives?
 - Defend its market(s)
 - Attack competitors
 - Enter new markets
 - Assets to leverage in negotiation
- Identification of Inventions
 - Training directed to potential inventors
 - Incentives to actual inventors
- Compensate extra work required by inventors:
 - Review of draft applications
 - Review of Prior art
 - Collection of extra data (e.g. experimental) for patenting purposes
 - Review of office actions

Country law interaction (art. 15-19 Ley de Patentes y Modelos, España)

- Who does own the Employee Invention?
 - Object of the contract
- Obligation to pay a fair economic compensation?

Inventiones Laborales art. 15

- 1. Las invenciones realizadas por el trabajador durante la vigencia de su contrato o relación de trabajo o de servicios con la empresa, que sean **fruto de una actividad de investigación explícita o implícitamente constitutiva del objeto de su contrato**, pertenecen al empresario.
- 2. **El trabajador**, autor de la invención, **no tendrá derecho a una remuneración suplementaria** por la realización, excepto si su aportación personal a la invención y la importancia de la misma para la empresa exceden de manera evidente del contenido explícito o implícito de su contrato o relación de trabajo.

Inventiones Laborales art. 16

- Las invenciones en cuya realización no concurren las circunstancias previstas en el artículo 15.1, pertenecen al trabajador, autor de las mismas

Inventiones Laborales art. 17

- 1. No obstante lo dispuesto en el artículo 16, cuando el trabajador realizase una invención en relación con su actividad profesional en la empresa y en su obtención **hubieran influido predominantemente conocimientos adquiridos dentro de la empresa o la utilización de medios proporcionados por ésta**, el empresario tendrá derecho a asumir la titularidad de la invención o a reservarse un derecho de utilización de la misma.
- 2. Cuando el empresario asuma la titularidad de una invención o se reserve un derecho de utilización de la misma, **el trabajador tendrá derecho a una compensación económica justa**, fijada en atención a la importancia industrial y comercial del invento y teniendo en cuenta el valor de los medios o conocimientos facilitados por la empresa y las aportaciones propias del trabajador.

Inventiones Laborales art. 18

- 1. El trabajador que realice alguna de las invenciones a que se refieren los artículos 15 y 17, deberá informar de ello al empresario, mediante comunicación escrita, con los datos e informes necesarios para que aquél pueda ejercitar los derechos que le corresponden en el plazo de tres meses. El incumplimiento de esta obligación llevara consigo la pérdida de los derechos que se reconocen al trabajador en este Título.
- 2. Tanto el empresario como el trabajador deberán su colaboración en la medida necesaria para la efectividad de los derechos reconocidos en el presente Título, absteniéndose de cualquier actuación que pueda redundar en detrimento de tales derechos

Invencciones Laborales art. 19

- 1. Las invencciones para las que se presente una solicitud de patente o de otro título de protección exclusiva dentro del año siguiente a la extinción de la relación de trabajos o de servicios podrán ser reclamadas por el empresario.
- 2. Será nula toda renuncia anticipada del trabajador a los derechos que la Ley le otorga en este Título

Q&A