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*WIPO TRAINING OF TRAINERS PROGRAM
ON EFFECTIVE INTELLECTUAL PROPERTY
ASSET MANAGEMENT BY SMALL AND
MEDIUM-SIZED ENTERPRISES IN DUBAI*

Dubai, December 19 to 23, 2010

Inventing the Future

**The Importance of Inventive and Innovative
Activity in Maintaining Competitiveness**

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Competitiveness

Defined as the ability of a firm to increase in size, market share and profitability. May be achieved by:

- Producing more cheaply, for example by finding ways to reduce labour costs
- Applying other non-price factors such as:
 - Human resource endowments, such as skills and worker motivation
 - Technical factors such as R&D capabilities, and the ability to adapt and use technologies
 - Managerial and organisational factors

Innovation

- Ideas applied successfully in practice
- Typically is expected to lead to a drastic change
 - In the system
 - By introduction of new products or services
- Expected to clear out the old and in with the new
- No limit to where innovations may be applied

Characteristics of Technical Innovation

- Coupling (of changing technology, production and markets)
- Creating (new products, processes, systems and industries)
- Clustering (of groups of related innovations)
- Comprehending (new skills, new technologies, new markets)
- Coping (with the technical and market uncertainty of innovation)

Drivers of Innovation

- Market Forces (Competition)
- Consumers (Value-Add to Existing Products)
- Regulatory Requirements (Pollution Control by EHS, ISO Certification etc.)
- Quality (Process Improvements, Waste & Defect Reduction, Increasing Productivity)

Inventions

- Solves a problem
- Stems from a novel & non-obvious idea
 - Subsequently, the working idea is applied to a specific or several applications
- Comes out of a business choice
 - Determined by market needs
 - Core competency taken into account
 - High monetary returns expected
 - Also typically one problem or application area

Innovation vs. Invention

- Invention solves an existing problem by providing solutions
- Innovation utilizes the invention and brings it to practice
- Innovation does not require a problem
 - Creates its own problem and provides solutions

- Problem Identification
- Problem Definition
- Appraisal of State-of-the-Art
- Identify Plausible Solutions
- Identify Best Mode of Operation

Invention Methods

- Systematic or Incremental Approach
- Out-of-the-box Approach
- Breakthrough
- Serendipity

The Central Theme

“How a Lone Inventor and an Unknown Company
Created the Biggest Communication Breakthrough
Since Gutenberg[†]”

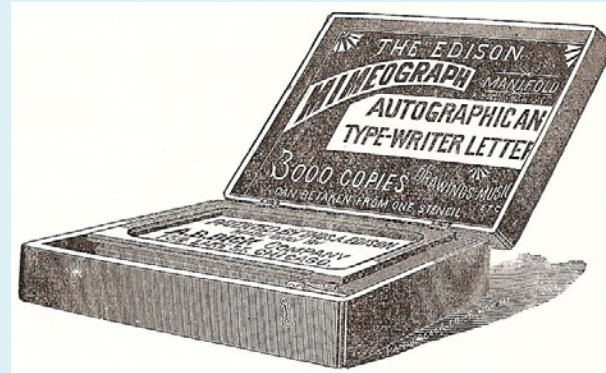
† Part of the title of the biography of Chester Carlson by David Owen

The Inventor

- B.S. in Physics from California Institute of Technology in 1930
- Research Engineer in Bell Laboratories
 - Found work “Dull and Routine”
- Transferred to the Patent Department
- Laid off during the Great Depression
- Found work in an electronics firm
 - Promoted to head of Patent Department in a few years
- Got his L.L.B degree in 1939



Chester Carlson



Mimeograph process made wet copies which then required a long drying time

Photostats were adequate but too expensive

Desirable to make “Xerographs” or “Dry Copies”

Electrophotography

Simple basic principle that led to a revolutionary technology:

when light and shadow strike a charged plate, the dark parts attract a special powder while the light parts repel



The Patenting Strategy

- First patent filed in 1937
- Developed the technology over 15 years
- Filed several patents along the way
 - His training in patent law stood him in good stead

Commercialization

- Tried to convince organizations to invest in the invention, unsuccessfully
 - Included giants like General Electric, IBM, RCA and the U.S. Army Signal Corps
- Finally struck a deal with Battelle Memorial Institute in 1944 to prove feasibility of technology
- Subsequently licensed to Haloid Corporation for commercialization

- Haloid Corporation sold its first photocopier in 1950
 - Used Carlson's concept of 'Xerography'
- Plain paper push button Photocopier first introduced in 1959
- The parent company coined the term XeroX
 - Short for Xerography
- Reinvented itself as Haloid Xerox in 1958
- Renamed itself as Xerox Corporation in 1961



- The initial model Xerox 914 made \$60 million in revenue in the year 1961 alone
 - Met their long term sales target within 6 months
- Revenues leaped to more than \$500 million within 5 years*
- Chester Carlson grossed about \$150,000,000 from his invention eventually

*: By this time, most of the original patents had expired

- Xerox Corporation has adapted to modern day demands
 - Reinvented itself as ‘The Document Company’
 - No more stand-alone copiers, but printers, scanners etc. associated with it
- Aware of environmental concerns of paper usage
 - According to a study conducted by Xerox, around 40 percent of the pages printed are only viewed once before being thrown away
 - In the process of developing “Erasable” Paper

XEROX.

Xerox logo 1971–2008



Redesigned the logo to reflect the changes in corporate strategy

Logos used herein are a registered trademark and/or copyrighted logo belonging to Xerox Corporation.

Introduction

- Tylenol®- a popular over-the-counter drug
 - Comes in various grades
- Sold by McNeil Laboratories
 - Now a subsidiary of J&J

Damage Control

- Within a week, parent company recalled all products
 - Estimated retail value of US\$100 million
- Issued warning on all national media
- Offered to exchange all capsules purchased
- Reintroduced product with triple-seal package very quickly
- Helped develop tamper-resistant packaging
- Introduced heavy price promotions

Incident

- In Fall 1982, 7 people died after ingesting Extra Strength Tylenol®
 - Capsules deliberately contaminated with cyanide
 - Killer never caught
- Brand sales collapsed immediately



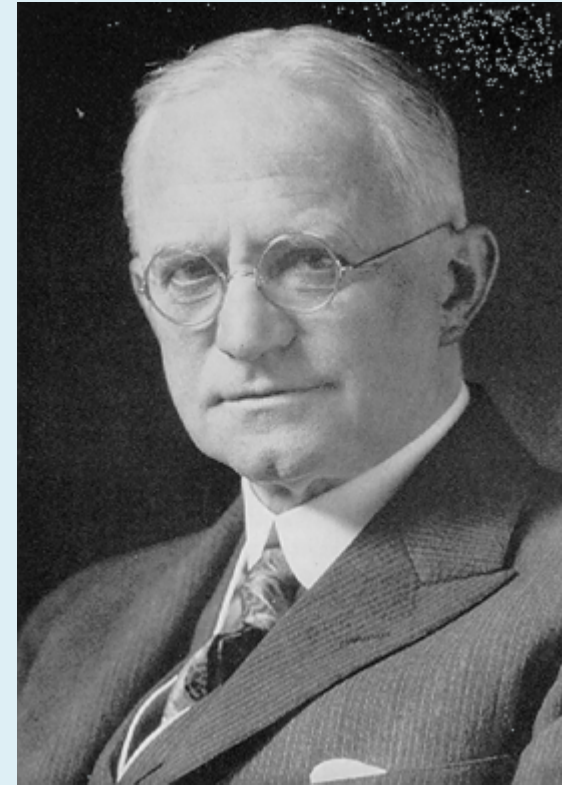
Result

Within a few years, regained market dominance

Shrewd Businessman

Using Patents to Get Initial Monopoly
Making Room to Enjoy Business
Success

- Developed and patented a dry photographic plate in 1880
- In 1884, patented a photographic medium
 - Both in England and U.S.A
- Patented roll film camera in 1888
- Filed key patents in all important facets
- Then, focused the company to making film when competition heated in the camera industry
 - By providing quality and affordable film to every camera manufacturer, Kodak managed to turn all competition into more business



George Eastman

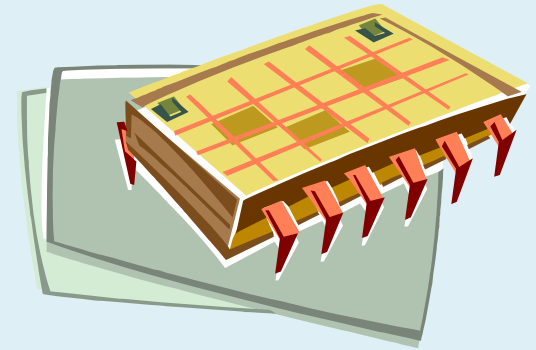
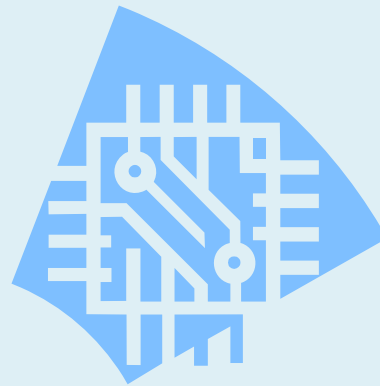
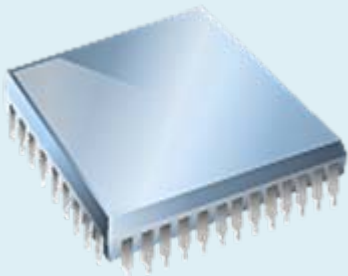
[†] Marketing phrase coined for the film roll camera created by George Eastman

Shifting Paradigms

“Next killer product is the patent itself†”

The Organization

- Patriot Scientific Corp.
- Based out of Carlsbad, CA, USA
- Six-person company
- Focused on establishing a new microprocessor architecture
- In the process filed several patents related to its core technology



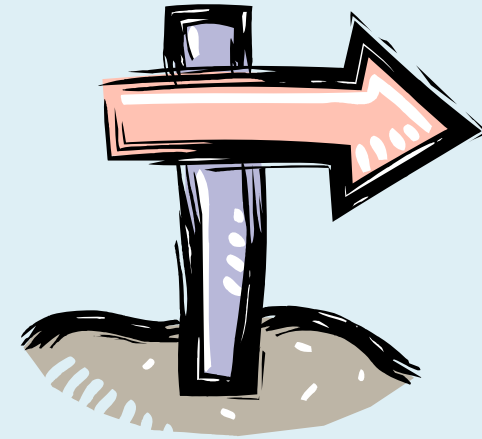
Shift in Focus

- The six-person company netted more than \$24 million in 2005 by licensing seven U.S. patents fundamental to CPUs
 - Advanced Micro Devices, Casio, Fujitsu, Intel, Hewlett-Packard
- Will be collecting more from royalties on sales of all microprocessor-based systems
 - Virtually every electronic product is touched by this portfolio
 - sales estimated at \$200 billion a year
- Further, hundreds of companies have been put on notice as potential infringers

Repositioning the Organization

- Then, clarified company's strategy & acquired a strong IP portfolio
- Subsequently, outsourced enforcement of its patents in a joint venture
- Commissioned a study to look at how it might dispose of its CPU business
- Decided that "This company doesn't need to be manufacturing anything or marketing a product"
- Essentially relied on the **licensing** team to create revenue
- Are one of a rising number of Patent Licensing and Enforcement Companies (PLECs)
- Multiple venture funds are forming to bankroll the efforts of these PLECs
- Effort to carve out business models in the midst of a gold rush in intellectual property

- Decisions regarding
 - Research Direction
 - Product Launches and Sales
 - Licensing
 - Litigations
 - Mergers & Acquisitions
 - Other Partnerships
- Protection Strategy
 - Filings
 - Blocking filings around competitors' patents
 - Fencing filings around core technology
 - Filings on Critical Design Elements
 - Invalidation & Infringement
 - Enforcement
- Trademark Strategy
 - Branding
 - Marketing



“If you Think it, Protect it...”

“Because if it is worth copying, it is worth protecting”

Small and Medium-Sized Enterprises (SMEs) - Windows Internet Explorer

http://www.wipo.int/sme/en/

Norton Phishing Protection on Identity Safe Log-ins

Google Small and Medium-Sized Enterprises (SMEs)

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Small and Medium-Sized Enterprises (SMEs)

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