

Blu-Ray Genesis

Did you ever wonder **WHO** invented the **Blu-ray** system? Here is the **Genesis** of that marvelous data storage/retrieval system.

NOTE: Previous **mechanical** means/methods of computing have **NOT** been included herein. **All** the steps listed herein, (in the author's opinion), are the highlights of transition, from the beginning, to final implementation of the **Blu-ray** information system

Basic underpinnings of steps leading to **Blu-Ray**, are as follows:

Alexander Graham Bell, **Thomas Edison**, **Michael Faraday**, **Benjamin Franklin**, **Luigi Galvani**, **Lord Kelvin**, **George Ohm**, **Nikola Tesla**, **Alessandro Volta**, **George Westinghouse**, **ALL** contributed to the defining of electricity, the properties, the magic, of the energy called **ELECTRICITY!**

1855 Heinrich Geisler invented the first **VACUUM PUMP**.

1897 Karl Ferdinand Braun invented the first **Cathode Ray Tube**.

1928 Philo Farnsworth invented the first **Television System**

Step 1 In **1938 Allan B. Dumont** manufactured the first **all-electronic Television** Set. He, (his company), was responsible for setting up the first television station (**W2XWV**), in the United States, (the world?). Later he changed that station name to **WABD**, which were the initials of his name, preceded by the letter ... "**W**".

NOTE: In the **New York City** metropolitan area, it was listed as **Channel 5**. It was the first program, on the first station, **ever** to be regularly telecast. It came on (**5**) days a week, at (**5**) P.M. and featured, "**Howdie-Doodie**", alongwith **Uncle Bob!**

Step 2 Between **1939** and **1942**, **Professor John Atanasoff** & a graduate student named **Clifford Berry**, built the world's **1st** Electronic computer. It also had several innovations in computing, including a **binary system**, (based on an arithmetic series of, **0's** and **1's**). Also included were a method of **parallel-processing**, **regenerative memory**, and a **separation of memory** and **computing functions**.

Step 3 In **1956**, **Carmine Cifaldi** created an **Electron Gun**, that cut the diameter of the Electron stream, to **HALF**, (the normal size), in a Cathode Ray Tube (**CRT**). It could then impact **smaller particles** of Phosphor. By impacting **smaller particles** of Phosphor, alongwith the proper, electronic circuitry, it was able to **DISPLAY** much more information, by way of the **DOUBLE-QUADRUPLE PRINCIPLE (DQP)**. This enabled the electron gun, able to portray a finer-detailed picture, via **1050-lines**, (versus **HDTV**, **1080-lines**, some **50** years later).

NOTE: The American system has always shown a (**525**) line definition, (**between lines**), versus the Japanese-sponsored **1,080** line system. **HDTV**, (as well as Cifaldi's **UHD 1050** line system). They both have the need to store (**4**) times the amount of data, than that of the (**525**) line system. Hence, the invocation of the **DOUBLE-QUADRUPLE PRINCIPLE, (DQP)**, was **absolutely necessary/ had to be observed!**

For more complete information about the **Double-Quadruple-Principle (DQP)**, see the Website www.cifaldi.org
Click on ... **Files** Click on ... **Double Quadruple** ... or simply ... **click on the following link:**

http://www.cifaldi.org/files/Double%20Quadruple%20Principle%20_DQP_%20%20Explantion%20Jan%2010-2009.pdf

The importance it had in a Cathode Ray Tube (**CRT**), relating to Television signalization, **AND** the operation of the **Blu-Ray system**, can **NOT** be **overstated!**

Step 4 In **1960**, the **FIRST** Electronically-produced laser, was made by **Theodore Maiman**, while working at the **Hughes Research Facility** in **California**.

Step 5 In 1965, James Russel invented the Compact Disc.

Step 6 In 1969, Paul Gregg invented the Optical Disc.

Step 7 In 1993, the pioneering of Cifaldi's use of the DOUBLE-QUADRUPLE PRINCIPLE, in the manufacture of Picture Tubes, to get a finer-detailed picture, alongwith Steps 4, 5 & 6 herein, were the immediate first steps needed, to create the Blu-Ray DVD disc system.

Step 8 In 1995, a consortium of (4) companies , (Matsushita, Phillips, Sony, Toshiba), used the previous mentioned technological advances, to produce the 1st DVD players .

Step 9 In 2002, based on the previous advances, an expanded consortium of (14) leading Electronic companies, (Apple, Dell Hitachi, HP, JVC, LG, Mitsubishi, Panasonic, Pioneer, Phillips, Sharp, Sony, TDK and Thomson), joined forces, and in 2004 established the Blu-ray Disc Association.

NOTE: NO individual person invented the DVD player That is why they announced, that they were the "Founders" of the Blu-ray Disc System ...NOT ...THE INVENTOR thereof! Again, based and built, on the previous disclosures herein!

Explanation of Blu-Ray Laser Disc for a non-technical person!

A blue-violet Laser-Beam, already has a smaller diameter laser-beam, via a wavelength of (405 nm), versus a Red Laser Beam (650 nm). This diameter is reduced even further, when presented thru a high numerical-aperture lens. The resultant action of the lens is responsible, for yet further reducing the diameter, of the Blu-violet Beam.

This narrower Blue-Violet laser beam, much like Cifaldi's Electron Gun, produced/became subject to, this DOUBLE-QUADRUPLE PRINCIPAL (DQP). However, as in Cifaldi's case, the Blu-Ray system was also achieved through, the INVERSE, of the DOUBLE-QUADRUPLE PRINCIPLE (DQP).

In the final analysis, the Blu-Ray Laser (25 GB), [per side] system, may now store more than (5) times the amount of information, than the Red Laser Beam, which holds (4.7 GB), of data. If new technology is further successful, there may be yet a 2nd layer of data storage, which may be applied to the Blu-Ray DVD. This then, would yield (8) times MORE information, than the heretofore conventional, Red laser system(s).

Normally, the DOUBLE-QUADRUPLE PRINCIPLE (DQP)-assisted, smaller-diameter laser beam, would produce double the amount of Horizontal lines. It ALSO would read/write, (2 X) the data on the lines, themselves. Therefore, it would then result in (4) times the amount of data, available for use!

Note: However, in the Blu-Ray DVD case, the DQP, only provides the basis for storing (3+) times as much information, ... (the Blue Laser Beam, is NOT exactly (1/2) the diameter of the Red Laser system).... The narrowing of the diameter of the Blue/Violet Laser Beam, via the numerical lens, provides the additional, (1+) storage capability for a total of (5) times, (instead of the usual (4) times) data, which may be written/read, on the DVD disc!

For the time being, (circa) 2007, the Blu-ray system can store as much as (50) GigaBytes of data, (on two sides). This would be critical for displaying High-definition Television, (HDTV). That is because, (as discussed hereinbefore), the high-definition use, needs (4) times as much space, than the regular T.V., as dictated by the DOUBLE-QUADRUPLE PRINCIPLE (DQP).

See in Google... Double Quadruple Principle ... DQP Explanation 10-27-08

Or Klik on the following link

http://www.cifaldi.org/files/Double%20Quadruple%20Principle%20_DQP_%20%20Explantion%20Jan%2010-2009.pdf