

## ***Double-Quadruple Principle***

The power, of the “Double-Quadruple-Principle” (D Q P). An easy example to envision: Set up a grid containing (20) units ACROSS, and (20) unit rows ] DOWN. The grid NOW contains (400) units.

Now, **DOUBLE** the size of the grid, so that we have (40) units ACROSS and (40) unit rows DOWN. The grid, **NOT 800** units (double), but NOW contains (1,600) units. This is seen, as a confirmation of the rule, of the D Q P.

## ***WATER-FLOW***

Other examples: A 1” pipe can pass through (100) gallons of water per minute (GPM). **Doubling** the diameter of the pipe, as you would suspect, does **NOT** pass 200 gallons of water per minute, but, actually passes 400 gallons of water, through the (2”) pipe!

**Through/From, an Open Pipe....** An extrapolation of a table, [courtesy of, **New Mexico State University**], shows a paper/table entitled, “**Estimating Water Flow from Pipes**”, (compliments of **Google**). In it, it shows “Pipe Height”, “Pipe I. D”, and “Gallons per minute”.

Such table reveals, (**NOT exactly**), but **near enough**, to confirm the **Double-Quadruple** amount, much as shown, in the other examples, enumerated/disclosed herein.

“**NOT exactly**”, because the **New Mexico State University** chart, calculates some sizes, times a (**Pi** of **3.14**), while others use the (**Pi** of **3.1416**). Both are correct, but it should **NOT** have been done in this case! Therefore, it is **NOT exactly** linear ... but close enough, so as to confirm the **validity**, of the D Q P.

## ***MUSIC***

Let us also discuss the frequency, (**PITCH**), generated by a string, (**guitar, violin, etc..**). It would appear that **Mersenne**, (a **French Monk 1588-1648, expert in the laws of numbers**), has come up with yet, another example of, the **Double-Quadruple Principle**, including .... the “**Inverse** thereof, as stated... next!

## ***MERSENNE’S LAW***

“To **reduce** the **fundamental frequency** of a string by half, (which denotes the **Pitch** of the string), we would have to quadruple the **MPUL**, [**Mass per**

Unit Length], of the string”!

He found also that, a **FOUR-FOLD** increase in tension is needed, to **DOUBLE** the **frequency** of a note. Even though, **MERSENNE** probably **NEVER** even heard of the **D Q P**, his calculations, however done, coincided exactly, with those, of the **D Q P**.

### **TELEVISION BROADCASTING**

T.V. signals which came over the Air-waves, [before streaming was originated (**2000**)] , also had to **obey**, the **rule** of the **Double Quadruple Principle (D Q P)**! The effect of the **D Q P**, when discussing, how and why, more **bandwidth/ space**, is required for the broadcasting, of **Television** signals **over the air waves**, & why it is necessary, is as follows:

The American T.V. system, has **always** projected (**525**) lines in horizontal resolution for its pictures. **HDTV**, is purported, (see **NOTE** later), to project **1,080** lines. Apparently, this is only **double** the amount of resolution needed, to broadcast television signals over the air-wave spectrum.

But, that is **NOT** the case. Because of the **D Q P**, apparently only **doubling** the amount of lines needed, it also needs the bandwidth space which contains **double** the amount of information **ON every line, itself!**

Therefore, by **doubling** the data **ON** the lines themselves, times **doubling** the amount of lines, now requires (**4**) times the bandwidth/space needed ... again, ...as taught, by the **D Q P**! Picture clarity via **HDTV** really **DOES** produce a sharper image on the T.V. Screen, but, for most purposes, (**525**) lines, is **NOT** bad at all!

**NOTE:** I do NOT know where the *Japanese* got **1080** from, because double times **525 ...** is **1050**, *which Cifaldi postulated!*

**NOTE:** Some (**50**) years later, after the use of the **D Q P**, (*high resolution cathode -ray tube*), by **Carmin** **Cifaldi**, it was one of the main reasons for the emergence of the **BLU-RAY DVD disc**. This then enabled a tremendous amount of data/information, using **laser-beam technology**, to be written/read, on a very small disc.

For a more comprehensive look, relative to the development of **Blu-Ray technology**, see [www.cifaldi.org](http://www.cifaldi.org) Click on **Files** ... Click on **Blu-Ray Genesis!**

**NOTE:** **Cifaldi** pioneered the **D Q P** technology, which was responsible for, relied mainly on, the **INVERSE of the Double Quadruple Principle**. In **GOOGLE**, see **Double Quadruple Principle (pdf) Television Broadcasting and/or Double-Quadruple Principle ....Television Manufacture and Repair/High Definition TV.**

**NOTE also:** In **1956**, at a special request from a medical company, **Carmine A. Cifaldi**, fabricated an **ELECTRON GUN**, and installed it in a special-purpose Cathode Ray Tube (**CRT**), which could break an appropriate televised signal, into **(1,050 )** Horizontal lines.

It thereby displayed a much finer picture, than the American **(525)-line** system, being used at that time. This **(1,050)-line** system, rivaled that, of the **(1,080)-line HDTV**, “**invented**” by the **Japanese**, (some **(40) years** later).

### ***WIND-GENERATED ELECTRICITY POTENTIAL***

The estimated amount of electricity, consumed in the **U.S.**, for **(1) year**, **[2007]**, was approximately **(1.4) Trillion KWh**. Here is a rudimentary example of **HOW** the **D Q P**, applies to wind-generated electricity: A **(10) MPH** wind, may generate **(1) Kw** of electricity, by a Wind-Generator, which has **(3)** foot wide blades.

A **20 MPH** wind will then generate **4 KW** of electricity. Extrapolating further, a **40 MPH** wind will generate **16 KW.....**An **80 MPH** wind would then generate **64 KW**, while a **160 MPH** wind will generate **256 KW!**

The same wind-generator, with **(6)** ft blades, can generate **(4)** Kw of electricity in the **10 MPH**. The same generator fitted with **(12)** ft blades, can then generate **(16) Kw**, in the **10 MPH** wind. Fitting it with **24** ft blades would see the generation of **64 KW**, in the **10 MPH** wind, (according to the **Double-Quadruple Principial**).

**NOTE:** That is why the land-based generators, now being erected (2006), in multiples, (“**FARMS**”), are fitted with the large blades, **(60** meter diameter), [**prox 200**feet]

An article, pictured in **Discover Magazine**, **Oct. 2008**, **Page 21**, written by **Fred Hapgood**, speculates **wind-turbines**, may generate tremendous amounts of electricity. The article also shows the picture of a single unit, which has **(4)** wind-mill blades, on that one unit.

In the stratosphere, winds are known to blow at wind velocities up to **200 MPH..** In this case, assume a **60 MPH** wind. Also, assume **(10 )** units. (total, **[40]** wind-turbines, connected together, which would be operated as a **“WIND-FARM”**

Extrapolations would then suggest, that the erection of **(400 )** **“FARMS”** per day, for **(10 )** years, **CAN** then supply that needed **1.4 Trillion KWh**, by the end of that period. If, higher wind-velocity areas are used, then in those cases, such will shorten the time that the **goal will be met**, or **even exceeded!** That end result, would be far safer than **Atomic Fission**, and easier to do, than **Atomic Fusion**.

**MORE IMPORTANTLY .....** It would: **SOLVE** the **oil/energy** crisis,

**SOLVE** the **Water-shortage** problem. **BEFORE** it starts, in earnest. (This has already been reported in certain areas of the world). **Global Wind-Farms** should be the aim of every government in the world, in a collaborative effort. That will ensure that the world, does **NOT** run out of electricity, in the foreseeable future.

**NEGATE** the **Global-Warming** problem produced by man, (if man was indeed culpable)! This author feels that man has **NO** control over climate!

**Very-very importantly**, that will also make the world much **safer**, because **(99 %)** of the world's atomic energy plants, may now be **closed/eliminated**. There is still a need for **nuclear isotopes**, or for other purposes. Most important of all ,.... would be for medical uses.

Motor vehicles use, consume/waste, too much oil! **WORSE YET!** ONE **[42]** gallon barrel of oil, makes **ONLY (19.5)** gal of gasoline, approx **+/- 46 %**, efficiency! The residue is used to make other products.

Since the **U.S.** has plenty of **natural gas**, ... **Battery/gas, Hybrid Vehicles**, (in the near-term), **should** be developed. The ultimate goal, should be that, of an **ALL ELECTRIC** vehicle, which would be powered by **electricity**, generated

*from inexhaustible natural sources, (such as, in this case, **WIND**).*

**NOTE:** 150 years from now (2008), ALL finite resources, Oil, Coal, Wood, as well as, *Uranium-produced Atomic Energy* will be *exhausted!* Based on the fact that *Uranium*-fueled nuclear-fission will **NO** longer be an option, after the 150-year period, science should explore, **NOW**, whether Nuclear Fusion may be somehow *sidestepped*.

The Oceans are loaded with Hydrogen, which would be the fuel. *Einstein's* theory of relativity says it can **NOT** be done, {in the conventional manner anyway, like **nuclear Fission**}.

With plenty of renewable-energy electricity available, oil trapped in large quantities of **SHALE (rock)**, may also be recovered. This oil would be added to the **United States'** natural oil reserves.

*Oil should **NEVER** again be used for heating, a fuel for motor vehicles, **NOR** for generating electricity!*

*Also, in [www.cifaldi.org](http://www.cifaldi.org)*

See the creation of a natural, inexhaustible, carbon-free, energy-creating network/system! Click on ... **Sky Wind-Farms**. next

<http://www.cifaldi.org/files/Sky%20Wind%20Farms%2010-21-2008.pdf>

*This is an important **companion document**, which contains a much more comprehensive explanation, about the beneficial use, of the wind. It represents a life-saving, renewable, **PERPETUAL**, energy-recovery-resource, almost **FREE**, with **NO** carbon-energy input! This system, relies heavily on, the **magic** of the **Double Quadruple Principle (D Q P)**!*

I am sure that people, who follow me, will be able to, build on/improve on, what is written herein. **Hopefully**, this document may energize others to devise ideas, other thoughts, of creating ideas, methods, systems (etc.), specifically designed, for the well-being, of **ALL** the world's inhabitants!

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