The computer and special software together constitute what is known in the Virtual Reality trade as the "reality engine." – Howard Rheingold

**IT WAS ONLY A SKIP** end a jump from social Darwinism to *biotechnological cybernetics*. The jump was easily taken in the Second World War, by the very people who victoriously opposed the biocracy of a National Socialist State that based its political legitimacy on the utopia of a redemptive eugenics. *Total mobilization and motorization* have always been two sides of the same coin in the race for biological and technological supremacy.

During this period when the various principles of the same massive attack on living beings were being worked out--at Auschwitz as at Hiroshima--Claude Shannon (1938) and Norbert Wiener (1948) independently collaborated on defining a trend that was to take us from the earlier BIOCRACY to a veritable TELECRACY designed to construct the "common collective conscience" that Stephan Zweig felt humanity's progress would be based on and that, in the end, turns out to be merely the creation of a social cybernetics based on the cult of information.

It is strange the way everyone remembers Charlie Chaplin in his role as the tragicomic dictator, yet not many remember the worker in *Modern Times*, tormented by his assembly-line job, force-fed by an *automatic feeder*, even though we march today to the beat of postindustrial automation, thanks to the computing capabilities of "transfer machines" . . .

A worker in the textile industry in western France says, "I make the same movement six hundred times an hour. With the old machines, you could have a bit of a break. Now, it's the computer that controls the assembly line and sets the pace."

With this level of hyperproductivity, in which a person can no longer keep up with the racing of his digital command tools, we are seeing a new epidemic, following the outbreak of stress. Repetitive Strain Injury, or RSI--acute inflammation of the bones and joints--is a new professional disease. It can lead to long-term paralysis of the employee's hands.

The common origin of *biopolitical* conditioning in Germany and *telepolitical* enslavement in the Anglo-Saxon world has been too soon forgotten. Today we are reduced to patting ourselves on the back over "technological progress" responsible not only for structural unemployment and the closing down of masses of factories and businesses, but, more especially, for the impasse that's looming on the horizon. As Maurice Merleau-Ponty pointed out in his last summer of 1960, "Functional thought has become a sort of absolutely artificial construct that has human creation deriving from a natural process of information, but this is itself modeled on the man-made machine."

The war of total mobilization was obviously well worth winning against Nazism with its racial and eugenic goals, but it was also the main catalyst in the development of a purely statistical notion of INFORMATION
due to the strategic necessities of intelligence, and thus led to the gradual spread of a SOCIOPOLITICAL CYBERNETICS that tends to eliminate not only the weak, but also the component of free will in human work, promoting, as we have seen, so-called "interactive user-friendliness." This is just a metaphor for the subtle enslavement of the human being to "intelligent" machines; a programmed symbiosis of man and computer in which assistance and the much trumpeted "dialogue between man and the machine" scarcely conceal the premises: not of an avowed racial discrimination this time so much as of the total, unavowed disqualification of the human in favour of the definitive instrumental conditioning of the individual.

According to John von Neumann, his work, The Computer and the Brain (1958), involves "... an approach toward the understanding of the nervous system from the mathematician's point of view. The 'mathematician's point of view,' as I would like to have it understood in this context, carries a distribution of emphases that differs from the usual one: apart from the stress on the general mathematical techniques, the logical and the statistical aspects will be in the foreground. Furthermore, logic and statistics should be primarily, although not exclusively, viewed as the basic tools of 'information theory.' Also that body of experience which has grown up around the planning, evaluating, and coding of complicated logical and mathematical automata will be the focus of much of this information theory."

The founding influence of statistics on contemporary functional thought has already been noted in the growth of mass societies and totalitarian Marxist systems. But, curiously, the innovatory role of statistics in fine-tuning the theory of cybernetic domination has been neglected--despite what Norbert Wiener, for instance, had to say when, just after the war, admittedly a little late, he warned of the dangers of the MILITARY-COMMUNICATIONS COMPLEX. The automatic or servomotor appliance and what is called artificial or motor-brain intelligence were soon confused in people's minds! The 1950s, in any case, deserve much closer historical analysis, insofar as they were the direct product of the military-industrial strategy that had been directed against Nazi Germany. Once the urgency of world war abated, the scientific community that had centered on Bletchley Park to fight Hitler then found itself tackling futuristic themes that were sometimes frankly utopian such as the idea, as old as Descartes and especially La Mettrie, of identifying the human brain with the components of a computer. A synthesis of data theory, game theory, signal theory, and neurobiology, the emergent cybernetics would thus attempt to simulate the organization of the living being on INTELLIGENT MACHINES, after the title of the book by Alan Turing, published in 1947. The combination of cybernetics and real-time telecommunication technology would soon enable the gap still separating information logic and its logistics to be closed. The opportunity came at the end of the 1950s with the U.S. anti-air defense project. With the aim of ensuring radar cover of North America, the U.S. Air Force called upon the Lincoln Laboratory at MIT to set up a research unit and come up with an advance warning system as quickly as possible: the SAGE Network (Semi-Automatic Ground Environment). The Lexington laboratory that had already built the WHIRLWIND, the first operational computer functioning in real time, then got down to the job of perfecting a computerized ground defense network to protect America, a gigantic spiderweb whose objective was to ensure control of an entire continent.

Numerous innovations in computer technology were spin-offs of the effective installation of this warning system, which used a real-time radar network for the very first time. One example we might cite is the notion of time-sharing, the coupling of the computer and the telephone that would give rise to TELEMATICS, computer simulation and even the beginnings of digital imagery.... In its way, the SAGE system opened the door to the world of virtual reality, that other world made necessary by the delivery speed of nuclear weapons.
Since the real environment--urban and rural space--could no longer escape the influence of electromagnetic networks, the possibility of reconditioning it by a virtual, fundamentally cybernetic environment became a reality. As a result, the incredible opportunity even arose of adding an extra, though simulated, dimension to the normal dimensions of human activity: computer-generated CYBERSPACE thereafter introducing a "fractional" dimension alongside the "whole" dimensions of our customary milieu.

But another aspect of this theoretical mutation deserves our attention: information's energetic side. Immediately after the war, you will recall, MATTER, until then considered in terms of MASS and ENERGY, was rounded off by the addition of the notion of INFORMATION. But, as relativity teaches, if the usual notions of mass and energy are distinct but equivalent--E= mc²--we then had to try to capture the relationship between information and energy.

From the 1950s onward, then, it became a question of assimilating "information" with "energy," a form of energy as yet unknown in physics. After latent (potential) energy and actual (kinetic) energy, the possibility of data (cybernetic) energy arose. Initially, with management data processing, it was the economic aspect of energy that prevailed as a key factor in industrial production. But with the subsequent emergence of computerized simulation and the boom in telecommunications, evidently promoting TELEACTTION, information comes to the fore as an entirely separate form of energy: sound and image energy, the energy of long-distance touch and contact. By saving on physical displacement, teleoperator technology suddenly looked like a serious rival to transport energy. The implementation of absolute speed in signal transmission eliminated the relative speed of the circulation of products, goods, and people, enabling huge strides in automatic traffic regulation due to various servo-control processes. Information suddenly looked like the same thing as its limit speed.

This telematic fusion/confusion of energy and live information ended up leading to the absolute equivalence of electronics and computer science, as though the energy of electricity had slyly turned into computer energy.

To understand this veritable sleight of hand better, though, we need to go back a few years to 1942, when the "behavioural methodology" was elaborated by advocates Norbert Wiener, cardiologist Arturo Rosenblueth, and Julian Bigelow, a young engineer. "The method consisted of privileging BEHAVIOR in studying whatever kind of phenomenon, whether natural or artificial. In other words, the changes the phenomenon undergoes due to its relationship with its environment. For a long time the object of mathematics had been the RELATIONSHIP between various phenomena, but the novelty of the behavioural method consisted in its virtually universal application and its radical character: there was no reality other than that constituted by the relationships between phenomena. In privileging observation of the behaviour of objects independently of the physical nature of the organs composing them, the new method made it possible to compare any 'objects' whatsoever--in particular, man and the machine. The traditional distinction among beings according to whether they belonged to the categories of mineral, vegetable, animal, or human thus yielded to a comparison that was oblivious to matter but passionately concerned, on the other hand, with comparing the COMPLEXITY of behaviour."

One of the essential elements of this contagious complexity was, of course, the notion of "retroaction." It is easier to grasp the convergence occurring between the behaviourist method and the assumed energetic aspect of the concept of data processing, if we remember the relative definition of speed: "Speed is not a phenomenon, it is the relationship between phenomena." When we bring both definitions together, we can
see that they are identical and that if there is no "reality" outside the relationships between phenomena, then the reality of information is entirely contained in the speed of its dissemination. And so INFORMATION (matter's third dimension) is only ever "the designation of the state a phenomenon assumes at a given moment." In other words, its "relief"--whence the current use after this of the terms "high definition" and "high resolution" in relation to sound and image.

CYBERSPACE, or, more exactly, "cybernetic space-time," will emerge from the observation, popular with the press, that information is of value only if it is delivered fast; better still, that speed is information itself!

There is one final point to note here: it was between the research centers at Bletchley Park in Great Britain and Los Alamos in the United States that the destiny, not to mention behaviour, of our fin-de-siècle would be played out. The simultaneous inventions of the bomb and the computer would in fact perfectly illustrate the marriage of inconvenience between energy and information. The "microchip revolution" today extends the damage done by the disastrous fallout of the "macroenergetic revolution," so that we are entitled to ask ourselves, after the end of the cold war and the decline of nuclear dissuasion, what will be the future damage caused by the onset of the computerized dissuasion of perceptible reality, which is more and more closely tied to a veritable "industrialization of simulation"?

"When science has learned to recognize the value of what it initially rejected as subjective, this will gradually be reintroduced--though incorporated as a specific case in the relationships and objects that define the world as science sees it. The world will then close in on itself; and, except for whatever in us thinks and does science, the impartial observer that lives inside us, we will have become a part or a moment in the Great Object."

The concept of the world as a GREAT OBJECT, denounced by Merleau-Ponty in 1959 as an optical illusion of perceptual faith, introduces us to the reality of the end of the millenium.

In Merleau-Ponty's phenomenology of perception, we find the idea Husserl shared that space is limited to the world of sensory experience and that beyond this there is no space worthy of the name, only the excess of a "time depth": universal time, which has nothing in common with the void of so-called cosmic space. But today, with INFORMATION as the last dimension of space-time matter, it is very tempting for infonauts to identify this spaceless time depth with information that is no longer restricted but has become generalized. In other words, with an INFORMATION-WORLD in which physics and computer science would be completely indistinguishable.

The pollution of the far reaches of the life-size geophysical world through implementation of the absolute speed of information-carrying waves, has now capped off the pollution of natural substances--the air, water, flora, and fauna. We will soon see the data pollution of our world proper and, finally, of the astrophysical universe itself. The expansion phenomenon that big bang supporters are keen on will extinguish itself suddenly before the "evidence" of the generalized principle of information expansion!

Once this happens, disinformation will no longer be concerned solely with dressing up the facts. It will also latch on to the reality principle to try to subtly introduce a new type of universe: a virtual universe, the ultimate form of an undermining of reality of cosmic proportions in which Newton's universal attraction
will be replaced once and for all by the cybernetic domination of thought. "That is how the Great Universe will one day use itself up," Girardi once lamented....

How can we fail to notice that the imminent reign of computer-generated virtuality was made possible, indeed necessary, by the long-awaited advent of globalization? If the world is closing in on itself and becoming a finite world, according to Merleau-Ponty, the necessity of overtaking it becomes patently obvious. Where the far horizon of our planet's antipodes has finally become an apparent, or more precisely, "trans-apparent" horizon, through the special effects of audiovisual techniques, the urgent necessity of another limit, a new frontier, suddenly makes itself felt--one that would no longer be geographic but infographic; the mental image of far distances hidden by the curve of the globe yielding to the instrumental imagery of a computer that can generate a virtual otherworld, thanks to the computing speed of its integrated circuits.

Scott Fisher claims apropos, "As the processing power and graphic frame rate on microcomputers quickly increase, portable, personal virtual-environment systems will also become available. The possibilities of virtual realities, it appears, are as limitless as the possibilities of reality. They can provide a human interface that disappears--a doorway to other worlds."

Once more a certain observation regarding the change in the speed of history comes into its own: long-term, short-term, real-term.

Fernand Braudel was right when he spoke of the energetic dimension of history, of time's speeding up.... If the tale of historical chronicles is effectively written information, it is also energy and mass--that of the living species.

The three states of matter are thus at work in our memories, and we will not be able to understand what has been happening for some years now unless we can see the connection between the two states of historical time: the "energetic" and the "informational." As time changes, it is speed that changes gear and history that changes camp, finally attaining a speed limit that cannot be exceeded.

The classic object of this twentieth century, now drawing to a close, is thus not, as ecologists have feared, the nuclear power station, but the particle accelerator. History is not just the geopolitics of peoples that have succeeded each other over the ages. It is also the implementation of the energy available in each particular period--formerly metabolic, then mechanical, relative speed, and absolute speed today with the boom in electromagnetic systems.

After the recent breaking of the sound and heat barriers, our era is the first to reach its cosmological speed limit with the breaking of the light barrier. With the corollary discoveries of the acceleration of historical time and the expansion of cosmic space, we are thus at last discovering their common limit. This has nothing to do with the specious arguments of Fukuyama and company, for it is not a matter of the end of history, but, more precisely, of history's upper speed limit, the time barrier merging with the light-speed barrier. As a Christian member of the resistance against totalitarianism once put it, "History is a dizzying kaleidoscope. The breathtakingly frantic pace at which events have been unfolding over the last quarter of a century favour the rise to power of forgetting." Whence not only the infamous and sinister "revisionism" or negationism that seeks to invalidate events occurring from the Second World War on, but, more
insidious still, the computerized undermining of reality that has today wound up in the defeat of the facts, since information now wins out over the reality of the event.

Having enabled history's TEMPO barrier to be attained, computing speed is now leading to the possible "industrialization" of forgetting and lack. Physicists claim that the speed of light, like universal gravity, is a property of empty space. If this is the case, then lack is at a premium and the indirect lighting of the light of speed will soon radically alter our understanding of time as well as of history. That disabused traveler Paul Morand once noted, "I miss the World; I feel homesick for each and every country." In the near future, if we are not careful, we will miss not only history and geography, we will also long to go back to space and times past.

"Soon knowing about space will be as useful as getting your driver's license," Wernher von Braun declared at the end of the 1960s, the decade that saw man land on the moon. There is no better comment, I think, on the cybernetic art that is now following in the wake of kinetic art in opening up processes said to be those of virtual reality.

To navigate space, CYBERSPACE, as one formerly steered a motor vehicle: this is indeed the great aesthetic mutation of INFORMATION technologies. To transfer to the immediate environment the control that until now was exercised over the "object," the engine of displacement—and this, thanks to acquiring a "fractal" dimension, not of space now, but of time, of real time, allowing an individual's proximity to be virtualized with the aid of a process that controls their movements: this is indeed the most astounding use of interactivity.

The recent innovation of the "computerized suit" that can generate a surrogate space around us, a portable virtual environment, points to future revelation of some "psychogeography" that will be based entirely on cybernetic energy, which will then supplement kinetic and potential energies.

Jaron Lanier, one of the promoters of this immaterial wardrobe reckons that, "When Virtual Reality becomes widely available around the turn of the century, it will not be seen as a medium used within physical reality, but rather as an additional reality. VR opens up a new continent of ideas and possibilities."

Required to locate himself beyond screens that have vanished, in an artificial world peopled by imperative signals, the man of tomorrow will not for long be able to escape an environmental control that will dog his every step, much as a missile is pursued by enemy defense....

Such an individual, dispossessed of his shadow, will not only no longer be at liberty to construct some kind of mental imagery, but the landscape too, the country of instrumental imagery that will wrap around him on all sides, will illustrate Artaud's suspicions about Andre Breton's movement: "Surrealism was an elusive virtual hope and probably as much of a con as anything else, but it drove you, in spite of everything, to try one last chance, to cling to whatever phantoms you could in case they managed, however slightly, to pull the wool over your eyes."

Controlled to an unimaginable degree, the "new man-machine" has certainly materialized the cutting loose initiated by Futurism, Cubism or Surrealism. But now it is less a question of dissociating objective appearances from reality, from the artist's subjective interpretation, than of shattering man's unity of
perception and of producing, this time AUTOMATICALLY, the persistence of a disturbance in self-perception that will have lasting effects on man's rapport with the real.

Campaigning for such a ghostly world, Eric Gullichsen and Randy Walser claim that, "in CYBERSPACE, there is no need to move about in a body like the one you possess in physical reality. You may feel more comfortable, at first, with a body like your 'own' but as you conduct more of your life and affairs in cyberspace your conditioned notion of a unique and immutable body will give way to a far more liberated notion of 'body' as something quite disposable and, generally, limiting."

With that kind of talk we might well ask ourselves if we are not on the verge of seeing the process of "artificial" rather than "natural" selection of man's ocular imagery get under way: the image ERECTUS of (graphic) optics ceding to the image SAPIENS of (infographic) electro-optics. In other words, to the sudden superiority of the digital image over the image of the naked eye, the search for high audiovisual resolution finally being explicable only in terms of the endlessly repeated will to ultimately alter the rapport between the real and the virtual, bringing us belated confirmation of Antonin Artaud's desperate observation about the immediate postwar period: "What defines the obscene life we are living is that all our perceptions, all our impressions have been distilled for us; we can now only live them one drop at a time, breathing the air of the scenery from the top and to the side."

Something is getting bigger, that's for sure, but it is not the frog in the fairy tale anymore--or the allegedly expanding sphere of a cosmos whose future now looks uncertain. It is the eyeball that now englobes man's entire body. Smashing the being's unity to smithereens, the fractional dimensions of cyberspace enable us to transfer the content of our sensations to an impalpable DOUBLE, suppressing, along with the old inside/outside dichotomy, the hic and nunc of immediate action.

This is where one of Karl Popper's most important ideas comes in, as developed in his study of causality and evolution, A World of Propensities. We should remember that Popper, too, has always enlisted in a cybernetic perspective. It was Popper, after all, who said, "We learn by trial and error, that is, retroactively." In his latest essay, Popper presents "the propensity interpretation of probability" as a generalized dynamism: "The tendency of statistical averages to remain stable if the conditions remain stable is one of the most remarkable characteristics of our universe. It can be explained, I hold, only by the propensity theory; by the theory that there exist weighted possibilities that are more than mere possibilities, but tendencies or propensities to become real: tendencies or propensities to realize themselves that are inherent in all possibilities in varying degrees and which are something like forces that keep the statistics stable.

According to this thesis, the statistical tendency becomes fact, becomes a FORCE, a force field, which we then have to reckon with. Popper goes on to say, "Propensities, it is assumed, are not mere possibilities but are physical realities. They are as real as forces, or fields of forces. And vice versa: forces are propensities. They are propensities for setting bodies in motion. Forces are propensities to accelerate, and fields of forces are propensities distributed over some region of space and perhaps changing continuously over this region (like distances from some given origin). "Fields of forces are fields of propensities; they are real, they exist."

This is not too hard to follow. Popper's introduction of the concept of a "statistical propensity" amounts to a fresh generalization of the idea of "force" (or dynamism) lifted wholesale from the mathematical logic of
1940s research. By this very fact, the indeterminist approach introduces us to hypotheses about virtual reality. In the same work, published in 1990, Popper continues, "Propensities, like Newtonian attractive forces, are invisible, and, like them, they can act: they are actual, they are real. We therefore are compelled to attribute a kind of reality to mere possibilities, especially to weighted possibilities. This view of propensities allows us to see in a new light the processes that constitute our world: the world process. The world is no longer a CAUSAL MACHINE—it can now be seen as a world of propensities, as an unfolding process of realizing possibilities and of unfolding possibilities."

Victim of the set, the CYBERNAUT has fallen prey to a synthetic illusion not so much visual as virtual, in which the visual thinking Rudolph Arnheim relished collapses before the misdemeanors of virtual thought, produced by an imagery entirely based on domination of the individual subjected to the mirages of cybernetic ideography. The new imperialism of instrumental thought suddenly unveils its PSYCHOGEOGRAPHICAL IMPERIUM along with its territory.

It is, moreover, revealing to observe the role played by NASA for more than ten years in the boom in virtual-reality technology. After numerous fiascos in the conquest of real space, the American space agency has ended up investing huge sums of money in research on instruments that may ensure its conquest of virtual space's lack of expanse in the near future.

On one hand, the construction of future orbital space stations already necessitated improvement in TELEROBOTIC technology; on the other, the very design of space probes meant new technologies of TELEPRESENCE had to be fine-tuned. NASA turned to the elders of the MIT team centered on Nicholas Negroponte in the early 1970s, particularly Scott Fisher, to produce the goods. But at the end of the day, the issue was primarily one of ensuring preparations for an identical exodus, beyond Earth and Earth's concrete reality. It was not enough for the audiovisual "unreality" created by the media just to do a cut-and-tuck job on our daily life. Infonauts had to prepare right now for abandonment of the material supports of immediate experience in order to exile us tomorrow in the immateriality of a new otherworld—the goal being to colonize the void of a viewless horizon in the next century, by deporting whole populations of consumers.

Besides, collusion between the two absences of space involved in cybernetics and astrophysics was to be further accelerated by the role played by space probes in astronomers' imaginary. Skeptical about the usefulness of "manned missions" into sidereal space, cybernauts promptly backed the idea of sending "remote-control robots" as a more rational and economic approach.

Everyone agreed that TELEEXPLORATION would soon replace manned flights, and NASA even envisaged feeding its computers the flow of images the probes sent back to allow the experts to explore the galaxy virtually.

The Jet Propulsion Laboratory in Pasadena then stepped in with an experimental film entitled Mars: The Movie. Using data furnished by the Viking probes as a basis for an astronomical model of virtual navigation, Kevin Hussey's video anticipated exploration of the Red Planet, the film's avowed aim being to prod the heads of the American space program into firmly deciding to abandon the very idea of manned flight in favour of the less onerous practices of virtual planetary exploration of visual data sent back by the space probes.
Thus, four centuries after the invention of Galileo's telescope, and thanks to the feats of
teleastronautics, the astronaut will travel in a room, summoning to himself stars less subject to the effects
of gravity than to the effects of the reality generator. When cosmic imagery is completely digitalized in the
next century by computer processors, cyborgs will be able to travel in their armchairs as simple
televisioners, discovering a surrogate world that will have emerged from information energy. The big bang,
a product of Edwin Hubble's calculations of the apparent speed of universal expansion, will suddenly yield
its scientific primacy to the (transparent) speed of the infinite expansion of computer calculation! This
explains the objective of the MARS-OBSERVER space probe, launched in autumn 1999. You will recall its
mission was to thoroughly map the planet with a view to future colonization. But what is less clear is the
nature of such colonization. Far from preparing a manned mission for some hypothetical landing of man on
Mars, in the twenty-first century, the topographical survey of Mars's surface was intended to make its
virtual exploration immediately possible. Whence the tremendous disappointment of the engineers glued to
their control panels at the Jet Propulsion Laboratory's ground control center when the probe's signals
suddenly went dead at the end of summer 1993.

By way of concluding this episode, a simple warning: if the electronic share-quoting system used by the
New York Stock Exchange--their trading program--had to be applied to scientific disciplines in the future,
deregulation would no longer only affect the financial products of the market economy. It would affect
production of a new metascientific rationality also subject to the cybernetic law of retroaction. One might
then expect the collapse, the crash of that instrumental reason Joseph Weizenbaum once denounced.

One last remark: if rapid globalization of trade implies, as we have seen, the virtualization of diverse
strategic, economic, and scientific representations, a formidable problem arises: that of the precise physical
location of the virtual object.

With confusion setting in between the real space of action and the virtual space of retroaction,
all positioning is, in fact, beginning to find itself in an impasse, causing a crisis in all position forecasting.

This "delocalization" also leads to uncertainty about the place of effective action, so that pre-
positioning becomes impossible, which then undermines the whole principle of forecasting. When
WHERE loses its priority to WHEN and HOW, a doubt remains--not about the effective plausibility of
"virtual reality" so much as about the nature of its location and thereby about the very possibility of
controlling the virtual environment.

Here is an anecdote that illustrates the inventory of a world that will from now on be lived in real time. A
new type of watch has been on the market for a while now in the United States. The watch does not tell
the time; it tells you where you are. Called the GPS--an abbreviation for Global Positioning System--this
little everyday object probably constitutes the event of the decade as far as globalization of location goes.

Able to measure minute differences in the reception speed of signals emitted by two of the four satellites
put up by the Americans, the GPS has now dethroned the SEXTANT by providing instant readings of the
position of pilots or navigators using it, and it can do this with a precision on the order of approximately
twenty-two yards--which will no doubt come down to less than twenty inches by the end of the century. So
much for the capability of an object highly symbolic of the importance of positioning in the world, of
cybernetic networks.
But what they usually fail to tell you in the publicity promoting the product--which has recently been acquired by most civil aviation companies and even quite a few national air forces--is that, in the case of a declaration of war against the United States, the Pentagon automatically reserves the right to tamper with what amounts to a "public service" by falsifying indications of proximity in order to guarantee the operational superiority of its armed forces!