GLOBAL UPDATES ON THE IRIDIUM® SYSTEM

COUNTDOWN TO '98

Development Schedule Maintains Accelerated Pace

Midway Point Reached on Milestones

Motorola and its subcontractors made significant strides in their development schedules during the second half of 1995. By the end of the year, a total of 23 milestones (out of 47 total) had been completed. This accelerated development schedule keeps the IRIDIUM system on target to begin service in 1998.

The development schedule includes readiness reviews that evaluate test plans. Milestone 19, a readiness review for the test and development phase, confirmed test plans for the space system. For instance, one readiness review performed for this milestone involved testing to ensure that the subscriber unit works with a satellite over the L-band link. "The program starts with low-level testing and builds progressively to test more integrated features of the network," says Robert K. Smith, director of ground segment engineering and operations for Iridium, Inc.

Milestone 20, a readiness review for the production phase, determined that the space vehicle suppliers have completed all necessary requirements to mass produce the flight hardware while maintaining the program schedule. Evaluating the tooling and material supply line was an important part of this review. "At our peak we will be turning out satellites at a rate of one a week," says Bud Clay, Motorola SATCOM's assistant program director for the IRIDIUM system. "Milestone 20, which is a suppliers' production readiness review, indicates that our suppliers are all ready to produce the various components that go into the system; that their factories are set up; that their equipment for testing when things come off the line is ready; and that they can provide us a continuous flow of the various components that we need for final assembly."

Qualification testing is another major step in validating the capability of the IRIDIUM system. This phase confirms that specific hardware or software designs will achieve their required functions. Milestone 18, assembling the first space vehicle for qualification testing, represented a major achievement for the IRIDIUM program. The work involved integrating the satellite bus, main mission antennas, communications module, and related software. The qualification test vehicle is now at Lockheed Martin Missiles and Space Headquarters in Sunnyvale, California, USA, for environmental tests. Scheduled to be completed by January 1996, the testing will subject the integrated space vehicle to thermal, vacuum, shock, vibration, and other harsh environments.

The first IRIDIUM flight bus was delivered last October to Motorola SATCOM headquarters in Chandler, Arizona, USA. Four other flight buses are currently in various stages of construction at the Lockheed Sanders facility in Nashua, New Hampshire and are scheduled for delivery in the first quarter of 1996.

A prime example of cycle-time reduction is being demonstrated by Lockheed Martin, which recently cut the assembly time for solar arrays from two weeks to two days. The procedure previously involved labor-intensive soldering. The new method welds the interconnects between the solar cells that provide electricity aboard the spacecraft. "Before it involved a lot of soldering," says Paul Rusnock, manager of the satellite bus team for Motorola SATCOM. "It was very intensive manual labor. Now it's automated."

Technicians inspect the gateway and crosslink antennas of an IRIDIUM satellite.

EMINENT VOICE

page 1

Inventing Global Personal Communications

Motorola SATCOM's Ray Leopold Talks About Conceiving of the IRIDIUM System

MOTOROLA recently presented its highest technical award, the Dan Noble Fellow, to Dr. Raymond J. Leopold in recognition of his leadership in creative and innovative technical endeavors, and in particular for his role in co-inventing (with Bary Bertiger and Ken Peterson) the IRIDIUM system and for helping to gain its critical backing. It's one of many awards that Leopold has received since he was a youngster participating in science fairs in Chicago, Illinois, USA. He earned his amateur radio license when he was 13 years old, and a year later he designed and built his first computer. He went on to the U.S. Air Force Academy, where he obtained a degree in electrical engineering. He continued to study electrical engineering at North Carolina State University, where he obtained his master's degree, and at the University of New Mexico, where he obtained his Ph.D. While in the Air Force he held many research and development positions, including serving as acting director of the Milstar terminal program. In 1987 he retired from the Air Force and joined Motorola, where he is now senior member of the technical staff and director of the future IRIDIUM systems office. He still has the computer he built in 1960.

***IRIDIUM Today*: Could you tell us about the genesis of the IRIDIUM system?**

Ray Leopold: Bary [Bertiger] went off on a vacation with his wife to the Cayman Islands. His wife is a real estate agent and, while Bary was enjoying himself on the beach, she was somewhat frustrated because she didn't have easy access to a telephone. Bary was laying there on the beach and he started thinking, *We ought to be able to pull something together that would allow you to communicate here on the beach—or anywhere else—and we ought to be able to do it with satellites or something.*

When he returned, Bary related his thoughts to several of us and we began considering many different options: low-flying satellites, high-flying satellites, remotely-piloted vehicles, high-flying balloons, infrastructure on the ground—anything that we could dream up. It became obvious fairly soon that if we really wanted to cover every place in the world—all the islands and everything else—we would need a satellite-based system.

What has been the most challenging aspect for you in working on the IRIDIUM system?

Probably obtaining initial regulatory approval. We were very encouraged when the ITU [International Telecommunication Union] allocated our basic line frequencies in 1992. They recently improved the regulatory aspects of these allocations at the 1995 World Radiocommunication Conference.

What do you consider to be the IRIDIUM sys-

[redacted]

page 2

Bucky Singleton/Visual Media GSTG

Ray Leopold

tem's most impressive technological feature?
This is going to sound silly, but I think the most impressive technological feature of the IRIDIUM system is that nothing is really leading-edge. We started off intending to pull the system together without inventing anything new and that still holds true. The biggest technological challenge, however, is getting all of the individual pieces to play together in such a large system.

Have you thought ahead to what the most significant contribution of the IRIDIUM system will be?
The answer is that no one knows. For the first time ever, people will be able to communicate to and from any place in the world with a small personal communications unit that they can carry on their person—and it is based on digital technology. It gets to the point where we are only limited by our imaginations in how we use the system. So I think that we haven't yet imagined the most significant uses of the IRIDIUM system.

"We are only limited by our imaginations in how we use the IRIDIUM system."

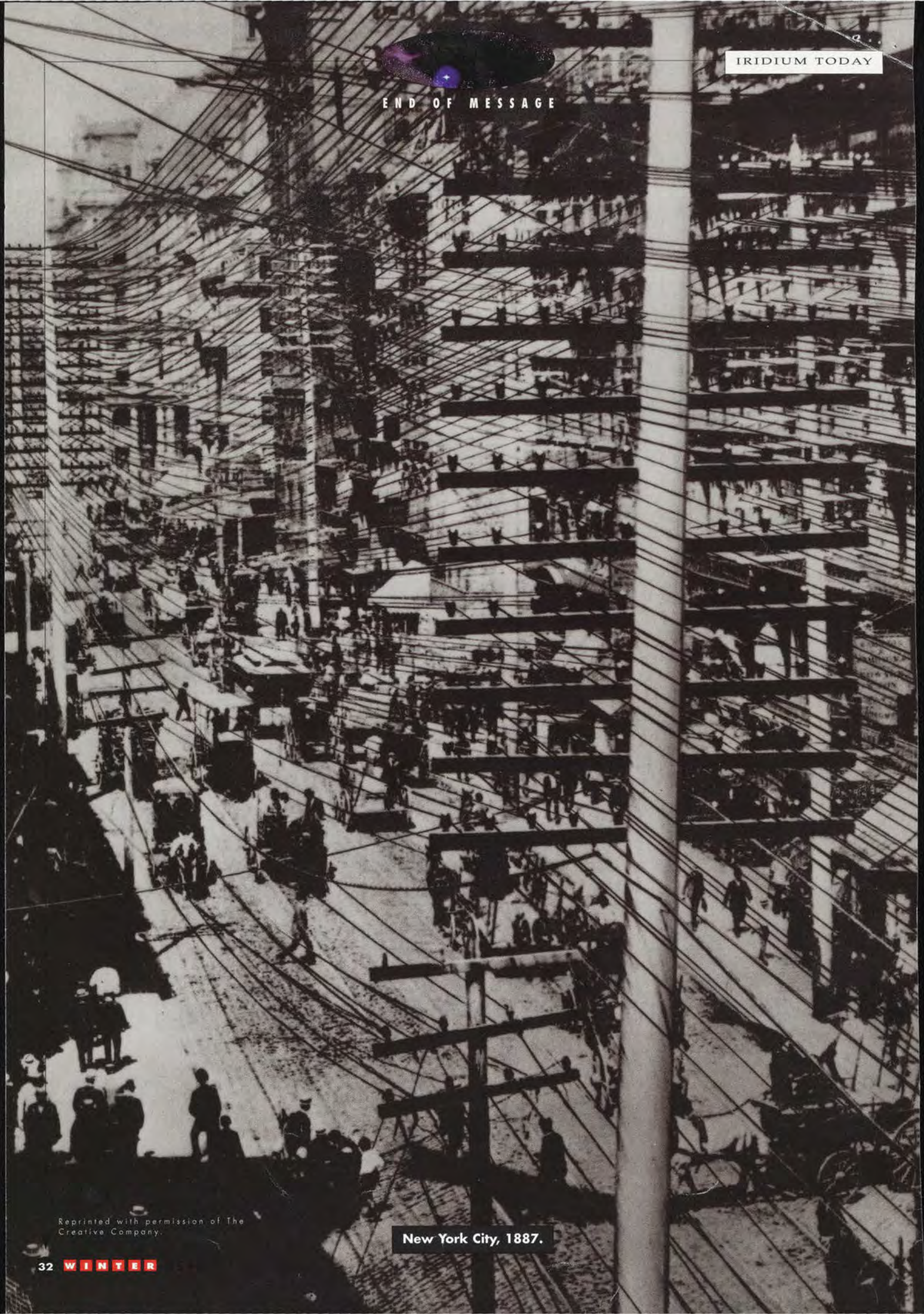
What is your response to critics of the IRIDIUM system?
I remind people that when Alexander Graham Bell first created the telephone there was an article on the front page of *The New York Times* that said something to the effect that this is an interesting gadget, and so forth, but why would anyone want to call Aunt Minnie on a telephone when they can hook up their horse and buggy and go visit her?

You must have critics in order to know that the message is getting out. When we originally announced the IRIDIUM system in June 1990, there were quite a few critics. And the progress we've made has all but silenced them. Yes, we took the initial heat because we were the ones that originally created this industry. But so many others are putting time and energy into their own systems that I have to respond by saying that imitation is the sincerest form of flattery.

What are your thoughts about the imitators who have followed in the footsteps of the IRIDIUM system?
I think there's enough of a market out there and there's probably quite a few niches in which you can create a good business. We felt that we were doing something revolutionary, like we were creating a whole new industry, and I think that idea has been reinforced by the companies that have created their own competing concepts. In some ways I feel very proud, in other ways I feel very humble.

Certainly the satellite manufacturers have jumped on the bandwagon. Many of them have come up with different systems. One of the things that makes us unique is that we have never looked at the IRIDIUM system as a satellite system. I'm somewhat concerned that some of the people who have flattered us by copying the concept don't want to miss out on a big opportunity—they're out there to sell more satellites. The IRIDIUM program is not a space system. It's a personal communications system that just happens to have some of its infrastructure in space. We've never lost sight of the fact that we're building a personal communications system for people like you and me.

END OF MESSAGE



New York City, 1887.

[redacted]

T-T-D

1 • Chuck Spinney 1 ✓

2 • Jim Burton 2 ✓

11 • P. M. Sprey 11

3 • Tom Christie 3 ✓

4 • Joe Romm 4 ✓

5 • Steve Rinaldi 6 ✓

10 • Grant Hammond 12 ✓

8 • Jack Stevens 7

6 • Art Breitkopf 8 ✓

9 • Mary E Holten 10

7 • Ray Leopold 9 ✓

12 • 2/Lt V. Ryer 13

5R • Barry Watts 5 ✓

• Wm Wheeler ✓

• Sam Booth ✓

Dr Sheddy

Clark's level 5
2 toe on rt foot
Malignant Melanoma

All Cat Scan & Blood tests
Negative & no swollen nodes

EKG & Chest X Ray

before surgery

Take off toe part of bone skin on ballroom of foot

[redacted]

$$w = m_0 c^2 \left(1 - \sqrt{1-\frac{v^2}{c^2}}\right) + \frac{m_0 c^2}{\sqrt{1-v^2/c^2}} \left(1 - \sqrt{1-\frac{v^2}{c^2}}\right)$$

$$E_d = \frac{m_0 c^2}{\sqrt{1-v^2/c^2}} - 1$$

$$E_K = m_0 c^2 \left(1 - \sqrt{1-\frac{v^2}{c^2}}\right)$$

$$w = m_0 c^2 \left[\left(\frac{1}{\sqrt{1-\frac{v^2}{c^2}}} - \cancel{1}\right) + \left(\cancel{1} - \sqrt{1-\frac{v^2}{c^2}}\right)\right]$$

$$w = m_0 c^2 \left[\frac{1}{\sqrt{1-\frac{v^2}{c^2}}} - \sqrt{1-\frac{v^2}{c^2}}\right)$$

1cg 2 D 7 W E W

@ Harry David Candela

[redacted]

DEW (sixties) — Frank Pettibone

[redacted]

Rich Dres

Triage
- Nothing can be done to save life
- Intervention necessary can save life
- wounded but not fatal

Dave Fader

[redacted]

Infrastructure / Isolation
&
Deception
or
Complexity

- What about the A-6 ~~[illegible]~~ CO's; Did they get the highest rating?
- Are Howard & his boss part of the A-6 community?
- What about early the FOO REP to station officer trying to assign you all?
- What about your previous reports

[redacted]

4350 (H)
4318
4334 — $\boxed{8306}$

Ron Bauman
[redacted]

53
8L
57
~~88~~

[redacted]

ok
D —

May 28
June 30
July 31
Aug 31
Sept 30
~~Oct.~~ ~~38~~
~~178~~

91/92 = 366
92/93 = 365
93/94 = 365
94/Oct = ~~178~~ 190

We acknowledge that the data on this form ~~may~~ is in error. However, we believe that this is due only to the erroneous information provided by the Dept. of Defense

May 28
June 30 (262)
July 31
Aug 31
Sept 30
Oct 31 (70)
Nov 9

[redacted]

21ST CENTURY ENCYCLOPEDIAS

308 FRONTIER DRIVE • ERIE, PENNSYLVANIA 16505
PHONE: (814) 459-6258 • FAX: (814) 454-1646

July 5, 1994

Mr. Jim Booth
[redacted]

Dear Mr. Booth:

Congratulations on the publication of your portrait of John Boyd published on July 4th.

The portrait is one of the best pieces of Erie journalism that I can recall in the more than forty years that I have been observing the news media in Erie.

I am engaged in publishing a Greater Erie Bicentennial Encyclopedia. A prospectus of the Encyclopedia is enclosed.

Please let me know if you are interested in serving as a Contributor or Editor.

Sincerely,

Joseph P. Scottino

[redacted]

[redacted] [redacted]

Dave Pyles 236

Go to used car lot (Elliott Brown)

Dave Pyles

Roger Tucker (tenant)

[redacted]

Ernst T. Roselbaum

[redacted]

Winston's mothers house (Tompton NY)

[redacted]

collection / correlation / compression

Transmission

New Sections

G

R

Capt Ted Dodderline

Col Bohn

Maj Tom Resha [redacted]

Newt Gingrich

[redacted] watch

Ga

2020

Air University
Maxwell AFB, AL

- Multispectral / Multisensory
  -- Ohio vs Detroit
  -- My Sweetheart
  -- Scrambler
  -- GHS,
  --

- Fusion from multiple sources -- similar to my brain takes in info and ~~pulls~~ binds info together,

- ~~vary~~ Varied in sensing or multisensory allows one to more clearly differentiate letters, words, sentences, paragraphs etc

RANDOMNESS IN ARITHMETIC AND THE LIMITS OF MATHEMATICAL REASONING

In J. Trân Thanh Vân, Proceedings of the Vth Rencontres de Blois, Editions Frontières

G. J. Chaitin, IBM Research Division, P. O. Box 704, Yorktown Heights, NY 10598, USA, chaitin@watson.ibm.com

One normally thinks that everything that is true is true for a reason. I've found mathematical truths that are true for no reason at all. These mathematical truths are beyond the power of mathematical reasoning because they are accidental and random.

Using software written in *Mathematica* that runs on an IBM RS/6000 workstation, I constructed a perverse 200-page algebraic equation with a parameter N and 17,000 unknowns:

$$\text{Left-Hand-Side}(N) = \text{Right-Hand-Side}(N).$$

For each whole-number value of the parameter N, ask whether this equation has a finite or an infinite number of whole number solutions. The answers escape the power of mathematical reason because they are completely random and accidental.

This work is an extension of famous results of Gödel and Turing using ideas from a new field called algorithmic information theory.

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[3] G. J. Chaitin, *Information-Theoretic Incompleteness*, World Scientific, 1992.

[4] G. J. Chaitin, "Randomness in arithmetic and the decline and fall of reductionism in pure mathematics," *Bulletin of the European Association for Theoretical Computer Science*, No. 50, June 1993, pp. 314–328.

[5] G. J. Chaitin, "Exhibiting randomness in arithmetic using *Mathematica* and C," *IBM Research Report RC-18946*, 94 pp., June 1993.

Forward: Gen Gray?

Conversations with Al Gray before Gulf War

About Jay Rez Donahue

Staubach — P&W

Strakes on F-104 / Gez Lubecki

Engine Cycle

Radar Bill sagging for F-15

overall vision - B

Deadlines

Ask the right ?

New Approach
to IET

How tuned in

A I — Pulgar

Cryptic Paper

Haven't read it

W

2 RT
2 FM&T
1 AFSC

Elaine Grossman

[redacted]

Copies to

- Elaine — Ride the Tiger
- Spread — RTT/ FM&T
- ? Ron — FM&T
- Burton — AFSC (people book)

James G. Burton
~~Jim Burton~~

[redacted]

O'Connell "Of Arms & Men"
warfare, weapons, aggression

Cassierer, Ernst "Essay on Man"

Deterrence

NS

ES

BV

S

A D

S I

GS — SEF — PICW — I/T

LEF

To Spinney at 21 Mar 94

VS

BV & SR

SI

SC & S7

orientation

80

84

Eric Rosenberg

[redacted]

L/Cmdr Kevin Seavey

[redacted]

C & C

Naval Doctrine Command

[redacted]

A

27 Mar 94

A Great Discovery ("filling in") that explains why my D&C works eg. snowmobile, G, H.S., etc.

C

B 3+1+24 = 28
D 7+3+34 = 44
C 17 = 17
R 44+1 45
134

A

ST DF 23+14 = 37
10 10
7 7
50 50
22 22

Liddell Hart
Strategy

Time Factor

42% below 96%
17% " 94%
some as low as 91%

Remainder armed for 96%
but could be ± 2%

54
198
204
245-7 *
258
269
282-3
286
295
305-6
321-2
337 *
343-4
384
399 *
403

W/T → Effect of signal (fast)
D/F → Location
Crypto → plaintext
Larsen →

- How do you read someone's mind?
- How do you read between the lines
- How do you come up with the Patterns of Conflict

20
23
31 → 32-38
42
43
66
70-7
91
105
115-118
115
166-167
174-175
195-6
198-9
204-5
210
238-40
234
230-231
229

I

Goal, Environment, Need for Decision

Creating Concepts, Suspicion, Incompleteness & ~~[illegible]~~ [illegible]

Indeterminacy & Uncertainty, Entropy & the Second Law

Destruction & Creation

Goal

- Survival, on own terms, Capacity for ind. action
- History shows us ...
-

Environment

- Limited resources
- Form, Dissolve, Reform factions (etc)
-

Decisions

- Action & decision critical
- Need for mental concepts that represent that world
- Raises question; How do we create these concepts

Concepts

- Two ways
- which it gets a view word of G & S or S & G
- all the reflection needed ...
- Now imagine ...
- Two conditions must be satisfied
-

Suspicion

II

Suspicion

- Coherent pattern of I and II
- Effort toward universal
- Such effort suggests at some point to expectation
- Why do we suspect this?
- Expect mismatch

Incompleteness & Consistency

- Kant Godel
- Does not imply ...
- Impact upon meeting two conditions for valid concept
- If we meet two conditions should all no difference between ...
- yet on one hand we use ... on the other we use ...
- Point we cannot determine ~~consistency~~ of system ... in terms of ... — within itself —
- The aspect of consistency ... Heisenberg ...

Indeterminacy & Uncertainty

- $\Delta v \, \Delta q \geq \frac{h}{m}$
- which states ...
- Examination of ...
- Point is the uncertainty values represent ...
- Why? Because ~~Photons & Electrons~~
- Because phenomena of observation (photons & electrons) no different than phenomena being observed

- ~~Else~~ other words — —

III

Entropy & the Second Law

- Confusion & Disorder are also related to ...
- Entropy as a concept ...
- From the law it follows ...
- Accordingly ...
- Naturally ...

Destruction & Creation

- ~~Naturally the movement~~ Taken together, these three notions, support ...
- Naturally uncertainty & disorder will ...

- Unless some kind of relief ...
- Fortunately there is a way out
  - First ...
  - Next ...
  - Finally
- By doing this ... we find
- However once again, ...
- In other words
-

Sci - Am. 6/72

NONSTANDARD ANALYSIS

This mathematical theory has restored infinitesimals to good standing. They had been employed since antiquity, but often with doubts, to solve such problems as finding a circle's area

by Martin Davis and Reuben Hersh

Nonstandard analysis, a new branch of mathematics invented 10 years ago by the logician Abraham Robinson, marks a new stage of development in several famous and ancient paradoxes. Robinson, now at Yale University, has revived the notion of the "infinitesimal"—a number that is infinitely small yet greater than zero. This concept has roots stretching back into antiquity. To traditional, or "standard," analysis it seemed blatantly self-contradictory. Yet it has been an important tool in mechanics and geometry from at least the time of Archimedes.

In the 19th century infinitesimals were driven out of mathematics once and for all, or so it seemed. To meet the demands of logic the infinitesimal calculus of Isaac Newton and Gottfried Wilhelm von Leibniz was reformulated by Karl Weierstrass without infinitesimals. Yet today it is mathematical logic, in its contemporary sophistication and power, that has revived the infinitesimal and made it acceptable again. Robinson has in a sense vindicated the reckless abandon of 18th-century mathematics against the strait-laced rigor of the 19th century, adding a new chapter in the never ending war between the finite and the infinite, the continuous and the discontinuous.

In the controversies over the infinitesimal that accompanied the development of the calculus, Euclid's geometry was the standard against which the moderns were measured. In Euclid both the infinite and the infinitesimal are deliberately excluded. We read in Euclid that a point is that which has position but no magnitude. This definition has been called meaningless, but perhaps it is just a pledge not to use infinitesimal arguments. This was a rejection of earlier concepts in Greek thought. The atomism of Democritus had been meant to refer not only to matter but also to time and space. But then the arguments of Zeno had made untenable the notion of time as a row of successive instants, or the line as a row of successive "indivisibles." Aristotle, the founder of systematic logic, banished the infinitely large or small from geometry.

Here is a typical example of the use of infinitesimal arguments in geometry:

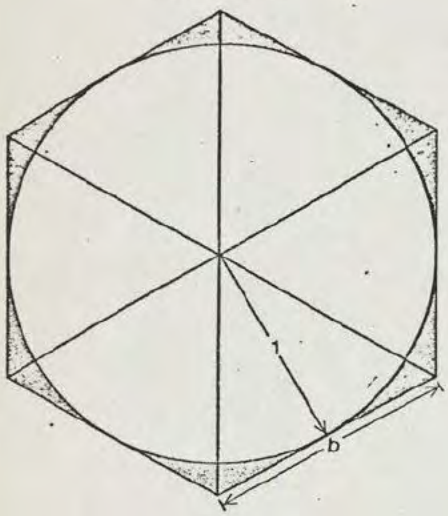
"We wish to find the relation between the area of a circle and its circumference. For simplicity we suppose that the radius of the circle is 1. Now, the circle can be thought of as composed of infinitely many straight-line segments, all equal to each other and infinitely short. The circle is then the sum of infinitesimal triangles, all of which have altitude 1. For a triangle the area is half the base times the altitude. Therefore the sum of the areas of the triangles is half the sum of the bases. But the sum of the areas of the triangles is the area of the circle, and the sum of the bases of the triangles is its circumference. Therefore the area of the circle of radius 1 is equal to one half its circumference."

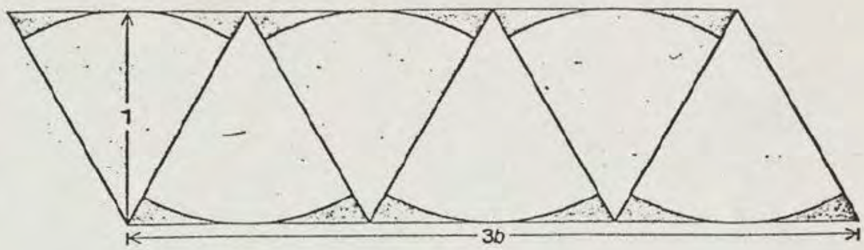
This argument, which Euclid would have rejected, was published in the 15th century by Nicholas of Cusa. The conclusion is of course true, but objections to the argument are not hard to find. The notion of a triangle with an infinitely small base is elusive, to say the least. Surely the base of a triangle must have length either zero or greater than zero. If it is zero, then the area is zero, and no matter how many terms we add we can get nothing but zero. On the other hand, if it is greater than zero, no matter how small, we will get an infinitely great sum if we add infinitely many terms. In neither case can we get a circle of finite circumference as a sum of infinitely many identical pieces.

The essence of this rebuttal is the assertion that even a very small nonzero number becomes arbitrarily large if it is added to itself enough times. Because the assertion was first made explicit by Archimedes, it is called the Archimedean property of the real numbers. An infinitesimal, if it existed, would be precisely a non-Archimedean number: a number greater than zero, which nevertheless remained less than 1, say, no matter how (finitely) many times it was added to itself. Archimedes, working in the tradition of Aristotle and Euclid, asserted that every number is Archimedean; there are no infinitesimals. Archimedes, however, was also a natural philosopher, an engineer and a physicist. He used infinitesimals and his physical intuition to solve problems in the geometry of parabolas. Then, since infinitesimals "do

METHOD OF EXHAUSTION is employed to prove indirectly that the area of a circle with radius 1 is half its circumference. In the proof on the opposite page a polygon is circum scribed on the circle (*top*), creating a number of triangles for which the areas can be calc lated readily. By increasing the number of sides of the polygon, as in polygon B and po gon N, the triangles increase in number and become thinner, and the difference in are circle and polygon becomes smaller. The difference will never be zero, however, for a p gon having any finite number of sides. Standard analysis avoids this difficulty by st that, as the number of sides increases to infinity, the polygon's area approaches the ci area as a limit. Nonstandard analysis avoids the concept of limit for a more suggesti planation using a polygon with infinitely many sides, each side having infinitesimal le

POLYGON A





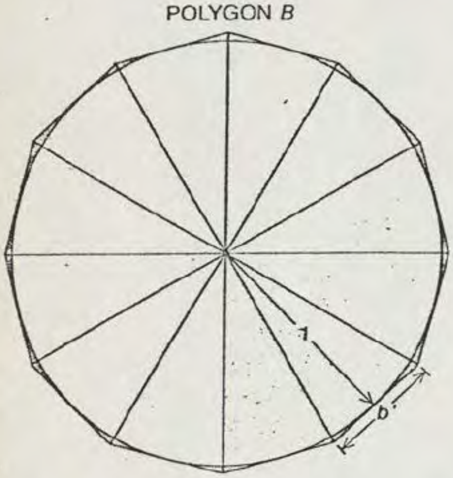
PERIMETER $P = 6b$

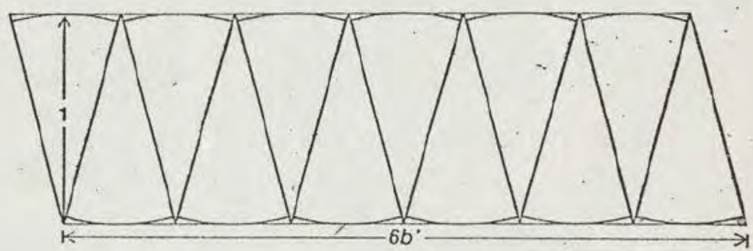
AREA OF POLYGON $A = 3b = \frac{1}{2}P$

CIRCUMFERENCE OF INSCRIBED CIRCLE $< P$

AREA OF INSCRIBED CIRCLE $< \frac{1}{2}P$

POLYGON B





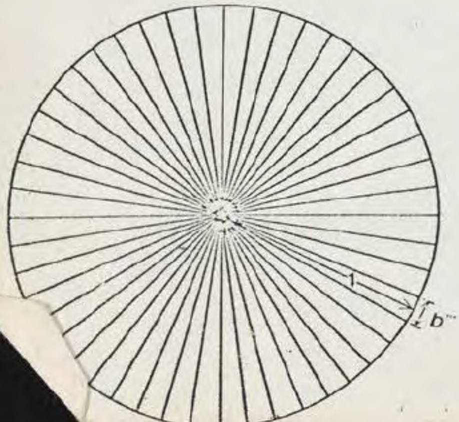
PERIMETER $P' = 12b'$

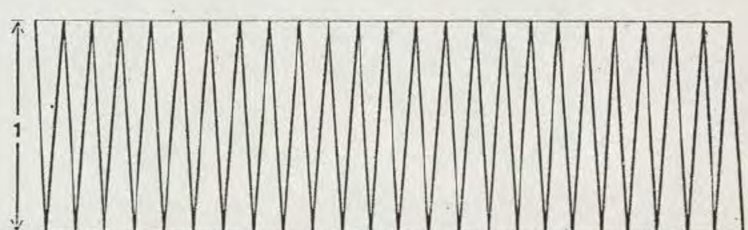
AREA OF POLYGON $B = 6b' = \frac{1}{2}P'$

CIRCUMFERENCE OF INSCRIBED CIRCLE $< P'$

AREA OF INSCRIBED CIRCLE $< \frac{1}{2}P$

POLYGON N





$\frac{n}{2}\,b''$

PERIMETER $P'' = nb''$

AREA OF POLYGON $N = \frac{nb''}{2} = \frac{1}{2}P''$

CIRCUMFERENCE OF INSCRIBED CIRCLE $\approx P''$

AREA OF INSCRIBED CIRCLE $\approx \frac{1}{2}P''$

not exist," he gave a "rigorous" proof of his results, using the "method of exhaustion," which relies on an indirect argument and purely finite constructions. The rigorous proof is given in his treatise *On the Quadrature of the Parabola*, which has been known since antiquity. The use of infinitesimals, which actually served to discover the answer, is in a paper called "On the Method," which was unknown until its sensational discovery in 1906.

Archimedes' method of exhaustion, which avoids infinitesimals, is in spirit close to the "epsilon-delta" method with which Weierstrass and his followers in the 19th century drove infinitesimal methods out of analysis. It is easy to explain if we refer to our example of the circle as an infinite-sided polygon. We wish to get a logically acceptable proof of the formula "The area of a circle with a radius of one unit equals half the circumference," which we discovered by a logically unacceptable argument.

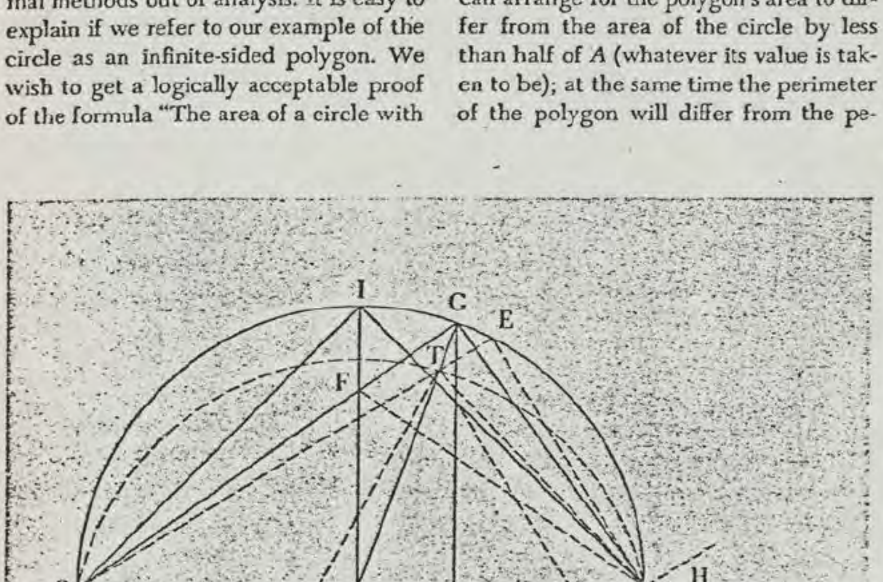
We reason as follows. The formula asserts the equality of two quantities associated with a circle with a radius of 1: its area and half its circumference. Thus if the formula is false, one of these quantities is larger than the other. Let A be the positive number obtained by subtracting the smaller from the larger. Now, we can circumscribe about the circle a regular polygon with as many sides as we wish. Since the polygon is composed of a finite number of finite triangles with altitude 1, we know that its area is half its perimeter. By making the number of sides sufficiently large we can arrange for the polygon's area to differ from the area of the circle by less than half of A (whatever its value is taken to be); at the same time the perimeter of the polygon will differ from the perimeter of the circle by less than half of A. But then the area and the semiperimeter of the circle must differ by less than A, which contradicts the supposition from which we started. Hence the supposition is impossible and A must be zero, as we wished to prove.

This argument is logically impeccable. Compared with the directness of the first analysis, however, there is something fussy, even pedantic, about it. After all, if the use of infinitesimals gives the right answer, must not the argument be correct in some sense? Even if we cannot justify the concepts it employs, how can it really be wrong if it works?

Such a defense of infinitesimals was not made by Archimedes. Indeed, in "On the Method" he is careful to explain that "the fact here stated is not actually demonstrated by the argument used" and that a rigorous proof had been published separately. On the other hand, Nicholas of Cusa, who was a cardinal of the church, preferred the reasoning by infinite quantities because of his belief that the infinite was "the source and means, and at the same time the unattainable goal, of all knowledge." Nicholas was followed in his mysticism by Johannes Kepler, one of the founders of modern science. In a work less well known nowadays than his discoveries in astronomy, Kepler in 1612 used infinitesimals to find the best proportions for a wine cask. He was not troubled by the self-contradictions in his method; he relied on divine inspiration, and he wrote that "nature teaches geometry by instinct alone, even without ratiocination." Moreover, his formulas for the volumes of wine casks are correct.

The most famous mathematical mystic was no doubt Blaise Pascal. In answering those of his contemporaries who objected to reasoning with infinitely small quantities, Pascal was fond of saying that the heart intervenes to make the work clear. Pascal looked on the infinitely large and the infinitely small as mysteries, something that nature has proposed to man not for him to understand but for him to admire.

The full flower of infinitesimal reasoning came with the generations after Pascal: Newton, Leibniz, the Bernoulli brothers (Jakob and Johann) and Leonhard Euler. The fundamental theorems of the calculus were found by Newton and Leibniz in the 1660's and 1670's. The first textbook on the calculus was written in 1696 by the Marquis de L'Hôpital, a pupil of Leibniz' and Johann Bernoulli's. Here it is stated at the



ROBLEM OF WINE CASK was attacked by Johannes Kepler by means of infinitesimals is *Nova stereometria doliorum vinariorum*, published in Austria in 1615 and 1616. roblem Kepler set for himself was finding the best proportions for a wine cask. A from a 19th-century reproduction of the paper that was published in Europe is shown.

outset as an axiom that two quantities differing by an infinitesimal can be considered to be equal. In other words, the quantities are at the same time considered to be equal to each other and not equal to each other. A second axiom states that a curve is "the totality of an infinity of straight segments, each infinitely small." This is an open embracing of methods that Aristotle had outlawed 2,000 years earlier.

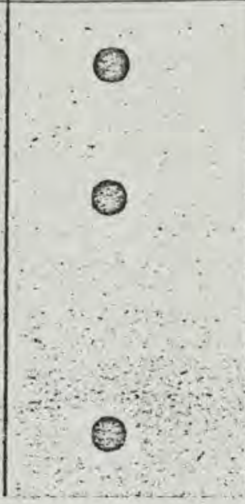
Indeed, wrote L'Hôpital, "ordinary analysis deals only with finite quantities; this one penetrates as far as infinity itself. It compares the infinitely small differences of finite quantities; it discovers the relations between these differences, and in this way makes known the relations between finite quantities that are, as it were, infinite compared with the infinitely small quantities. One may even say that this analysis extends beyond infinity, for it does not confine itself to the infinitely small differences but discovers the relations between the differences of these differences."

Newton and Leibniz did not share L'Hôpital's enthusiasm. Leibniz did not claim that infinitesimals really existed, only that one could reason without error as if they did exist. Although Leibniz could not substantiate this claim, Robinson's work shows that in some sense he was right after all. Newton tried to avoid the infinitesimal. In his *Principia Mathematica*, as in Archimedes' *On the Quadrature of the Parabola*, results that were originally found by infinitesimal methods are presented in a purely finite Euclidean fashion.

Dynamics had become as important as geometry in providing questions for mathematical analysis. The leading problem was the connection between "fluents" and "fluxions," what would today be called the instantaneous position and the instantaneous velocity of a moving body.

Consider a falling stone. Its motion is described by giving its position as a function of time. As it falls its velocity increases, so that the velocity at each instant is also a variable function of time. Newton called the position function the "fluent" and the velocity function the "fluxion." If either of the two is given, the other can be determined; this connection is the heart of the infinitesimal calculus fashioned by Newton and Leibniz.

In the case of a falling stone the fluent is given by the formula $s = 16t^2$, where s is the number of feet traveled and t is

WEIERSTRASS	FALLING STONE: POSITION $s = 16t^2$	ROBINSON
Set $t' = 1 + \Delta t$. Δt is a positive real number. $s' = 16 + 32\Delta t + 16(\Delta t)^2$. $\Delta s = s' - s$ $= 32\Delta t + 16(\Delta t)^2$. $\frac{\Delta s}{\Delta t} = 32 + 16\Delta t$. Given any positive real number ϵ, however small, we choose $\delta = \frac{\epsilon}{16}$. Then for all $\Delta t < \delta$, $\frac{\Delta s}{\Delta t} - 32 = 16\Delta t < 16\delta$ $= 16 \cdot \frac{\epsilon}{16} = \epsilon$. So Instantaneous velocity = $\lim_{\Delta t \to 0} \frac{\Delta s}{\Delta t} = 32$.		Set $t' = 1 + dt$. dt is a positive infinitesimal number. $s' = 16 + 32dt + 16(dt)^2$. $ds = s' - s$ $= 32dt + 16(dt)^2$. $\frac{ds}{dt} = 32 + 16dt$. Since dt is infinitesimal, so is $16dt$. 32 is a standard real number. So Instantaneous velocity = standard part of $\frac{ds}{dt} = 32$.

FALLING-STONE PROBLEM is depicted as it would be solved by standard analysis (*left*) and nonstandard analysis (*right*). Standard analysis, exemplified by the 19th-century German mathematician Karl Weierstrass, computes the velocity of the falling stone at any instant without employing infinitesimals, defining the speed instead as a limit that is approximated by ratios of finite increments. Abraham Robinson of Yale University, who invented nonstandard analysis, makes the computation with a modified infinitesimal method.

stone was released. As the stone falls its velocity increases steadily. How can we compute the velocity of the falling stone at some instant of time, say at $t = 1$?

We could find the *average* velocity for a finite time by the elementary formula: velocity equals distance divided by time. Can we use this formula to find the instantaneous velocity? In an infinitesimal increment of time the increment of distance would also be infinitesimal; their ratio, the average speed during the instant, should be the finite instantaneous velocity we seek.

We let dt stand for the infinitesimal increment of time and ds for the corresponding increment of distance. (Of course ds and dt must be thought of as single symbols and not as d times t or d times s.) We want to find the ratio ds/dt, which is to be finite. To find the increment of distance from $t = 1$ to $t = 1 + dt$ we compute the position of the stone when $t = 1$, which is $16 \times 1^2 = 16$, and its position when $t = 1 + dt$, which is $16 \times (1 + dt)^2$. Using a little elementary algebra, we find that ds, the increment of distance, which is the difference of these two distances, is $32dt + 16dt^2$. Thus the ratio ds/dt, which is the quantity we are trying to find, is equal to $32 + 16dt$.

Have we solved our problem? Since the answer should be a finite quantity, we should like to drop the infinitesimal term $16dt$ and get the answer, 32 feet per second, for the instantaneous velocity. That is precisely what Bishop Berkeley will not let us do.

The Analyst, Berkeley's brilliant and devastating critique of the infinitesimal method, appeared in 1734. The book was addressed to "an infidel mathematician," who is generally supposed to have been Newton's friend the astronomer Edmund Halley. Halley financed the publication of the *Principia* and helped to prepare it for the press. It is said that he also persuaded a friend of Berkeley's of the "inconceivability of the doctrines of Christianity"; the Bishop responded that Newton's fluxions were as "obscure, repugnant and precarious" as any point in divinity.

"I shall claim the privilege of a Freethinker," wrote the Bishop, "and take the liberty to inquire into the object, principles, and method of demonstration admitted by the mathematicians of the present date, with the same freedom that you presume to treat the principles and mysteries of Religion." Berkeley declared that the Leibniz procedure, simply "considering" $32 + 16dt$ to be "the same" as 32, was unintelligible. "Nor will it avail," he wrote, "to say that [the term neglected] is a quantity exceedingly small; since we are told that *in rebus mathematicis errores quam minimi non sunt contemnendi*." If something is neglected, no matter how small, we can no longer claim to have the exact velocity but only an approximation.

Newton, unlike Leibniz, tried in his later writings to soften the "harshness" of the doctrine of infinitesimals by using physically suggestive language. "By the ultimate velocity is meant that with which the body is moved, neither before it arrives at its last place, when the motion ceases, nor after; but at the very instant when it arrives.... And, in like manner, by the ultimate ratio of evanescent quantities is to be understood the ratio of the quantities, not before they vanish, nor after, but that with which they vanish." When he proceeded to compute, however, he still had to justify dropping unwanted "negligible" terms from his computed answer. Newton's argument was to find first, as we have done, $ds/dt = 32 + 16dt$, and then to set the increment dt equal to zero, leaving 32 as the exact answer.

But, wrote Berkeley, "it should seem that this reasoning is not fair or conclusive." After all, dt is either equal to zero or not equal to zero. If dt is not zero, then $32 + 16dt$ is not the same as 32. If dt is zero, then the increment in distance ds is also zero, and the fraction ds/dt is not $32 + 16dt$ but a meaningless expression, 0/0. "For when it is said, let the increments vanish, i.e., let the increments be nothing, or let there be no increments, the former supposition that the increments were something, or that there were increments, is destroyed, and yet a consequence of that supposition, i.e., an expression got by virtue thereof, is retained. Which is a false way of reasoning." Berkeley charitably concluded: "What are these fluxions? The velocities of evanescent increments. And what are these same evanescent increments? They are neither finite quantities, nor quantities infinitely small, nor yet nothing. May we not call them the ghosts of departed quantities?"

Berkeley's logic could not be answered; nevertheless, mathematicians went on using infinitesimals for another century, and with great success. Indeed, physicists and engineers have never stopped using them. In pure mathematics, on the other hand, a return to Euclidean rigor was achieved in the 19th century, culminating under the leadership of Weierstrass in 1872. It is interesting to note that the 18th century, the great age of the infinitesimal, was the time when no barrier between mathematics and physics was recognized. The leading physicists and the leading mathematicians were the same people. When pure mathematics reappeared as a separate discipline, mathematicians again made sure that the foundations of their work contained no obvious contradictions. Modern analysis secured its foundations by doing what the Greeks had done: outlawing infinitesimals.

To find an instantaneous velocity according to the Weierstrass method we abandon any attempt to compute the speed as a ratio. Instead we define the speed as a limit, which is approximated by ratios of finite increments. Let Δt be a variable finite time increment and Δs be the corresponding variable space increment. Then $\Delta s/\Delta t$ is the variable quantity $32 + 16\Delta t$. By choosing Δt sufficiently small we can make $\Delta s/\Delta t$ take on values as close as we like to the value 32, and so, by definition, the speed at $t = 1$ is exactly 32.

This approach succeeds in removing any reference to numbers that are not finite. It also avoids any attempt directly to set Δt equal to zero in the fraction $\Delta s/\Delta t$. Thus we avoid both of the logical pitfalls exposed by Bishop Berkeley. We do, however, pay a price. The intuitively clear and physically measurable quantity, the instantaneous velocity, becomes subject to the surprisingly subtle notion of "limit." If we spell out in detail what that means, we have the following tongue-twister:

"The velocity is v if, for any positive number ε, $\Delta s/\Delta t - v$ is less than ε in absolute value for all values of Δt less in absolute value than some other positive number δ (which will depend on ε and t)."

We have defined v by means of a subtle relation between two new quantities, ε and δ, which in some sense are irrelevant to v itself. At least ignorance of ε and δ never prevented Bernoulli or Euler from finding a velocity. The truth is that in a real sense we already knew what instantaneous velocity was before we learned this definition; for the sake of logical consistency we accept a definition that is much harder to understand than the concept being defined. Of course, to a trained mathematician the epsilon-delta definition is intuitive; this shows what can be accomplished by proper training.

The reconstruction of the calculus on the basis of the limit concept and its epsilon-delta definition amounted to a reduction of the calculus to the arithmetic of real numbers. The momentum gathered by these foundational clarifications led naturally to an assault on the logical foundations of the real-number system itself. This was a return after two and a half millenniums to the problem of irrational numbers, which the Greeks had abandoned as hopeless after Pythagoras. One of the tools in these efforts was the newly developing field of mathematical, or symbolic, logic.

More recently it has been found that mathematical logic provides a conceptual foundation for the theory of computing machines and computer programs. Hence this prototype of purity in mathematics now has to be regarded as belonging to the applicable part of mathematics.

The link between logic and computing is to a great extent the notion of a formal language, which is the kind of language machines understand. And it is the notion of a formal language that enabled Robinson to make precise Leibniz' claim that one could without error reason as if infinitesimals existed.

SYMBOL	INTENDED MEANING
$\sim$	not
&	and
$\vee$	or
$\rightarrow$	implies
$\forall$	for all
$\exists$	there exists
=	equals
x y z	variables ranging over real numbers
f g h	variables ranging over other objects
+ · <	plus, times, less than
( ) [ ]	parentheses
0 1 2	symbols for particular numbers

BOLS EMPLOYED in the formal language L, in which calculus can be expressed, are lated into English in this partial dictionary. The formal language, which employs as being infinitely small positive or negative numbers that still had "the same properties" as the ordinary numbers of mathematics. On its face the idea seems self-contradictory. If infinitesimals have the same "properties" as ordinary numbers, how can they have the "property" of being positive yet smaller than any ordinary positive number? It was by using a formal language that Robinson was able to resolve the paradox. Robinson showed how to construct a system containing infinitesimals that was identical with the system of "real" numbers with respect to all those properties expressible in a certain formal language. Naturally the "property" of being positive yet smaller than any ordinary positive number will turn out *not* to be expressible in the language, thereby escaping the paradox.

The situation is familiar to anyone who has ever communicated with a computing machine. A computer accepts as inputs only symbols from a certain list that is given in advance to the user, and the symbols must be used in accordance with certain given rules. Ordinary language, as used in human communication, is subject to rules that linguists are still far from understanding. Computers are "stupid," if you have to communicate with them, precisely because unlike humans they work in a formal language with a given vocabulary and a given set of rules. Humans work in a natural language, with rules that have never been made fully explicit.

Mathematics, of course, is a human activity, like philosophy or the design of computers; like these other activities, it is carried on by humans using natural languages. At the same time mathematics has, as a special feature, the ability to be well described by a formal language, which in some sense mirrors its content precisely. It might be said that the possibility of putting a mathematical discovery into a formal language is the test of whether it is fully understood.

In nonstandard analysis one takes as the starting point the finite real numbers and the rest of the calculus as known to standard mathematicians. Call this the "standard universe," designated by the letter M. The formal language in which we talk about M can be designated L. Any sentence in L is a proposition about M, and of course it must be either true or false. That is, any sentence in L is either true or its negation is ... We call the set of all true sen... , and we say M is a "model" for ... his we mean that M is a mathe... structure such that every sen-

FORMAL SENTENCE IN L	INTERPRETATION IN STANDARD UNIVERSE	INTERPRETATION IN NONSTANDARD UNIVERSE
$(\forall x)(\exists y)[x=0 \vee xy=1]$ Literally: For all x, there exists y such that either $x=0$ or $xy=1$.	Every nonzero real number has a reciprocal.	Every nonzero nonstandard real number has a nonstandard reciprocal; in particular positive infinitesimals have reciprocals that are larger than any standard, real number, i.e., they are infinite.

FORMAL SENTENCE is stated in the language L. The middle column gives its interpretation or meaning in the standard universe; right-hand column, in the nonstandard universe.

ring to M, is true. Of course, we do not "know" K in any effective sense; if we did, we would have the answer to every possible question in analysis. Nevertheless, we regard K as being a well-defined object, about which we can reason and draw conclusions.

The essential fact, the main point, is that in addition to M, the standard universe, there are also nonstandard models for K. That is, there are mathematical structures M^*, essentially different from M (in a sense we shall explain) and that nevertheless are models for K in the natural sense of the term: there are objects in M^* and relations between objects in M^* such that if the symbols in L are reinterpreted to apply to these pseudo-objects and pseudo-relations in the appropriate way, then every sentence in K is still true, although with a different meaning.

A crude analogy may help the intuition. Let M be the set of graduating seniors at Central High School. Suppose, for argument's sake, that all these students had their picture taken for the yearbook, where the students all appear in two-inch squares. Then M^* can be the set of all two-inch squares on any page of the yearbook. Clearly, with an obvious interpretation, any true statement about a student at Central High corresponds to a true statement about a certain two-inch square in the yearbook. Still, there are many two-inch squares in the yearbook that do not correspond to any student. M^* is much bigger than M; in addition to members corresponding to the members of M, it also contains many other members.

Hence the statement "Harry Smith is thinner than George Klein," when interpreted in M^*, is a statement about certain two-inch squares. It is not true if the relation "thinner than" is interpreted in the standard way. Thus "thinner than" has to be reinterpreted, as a pseudo-relation, between pseudo-students (pic-

pseudo-relation "thinner than" (in quotation marks) by saying that the two-inch square labeled "Harry Smith" is "thinner than" the two-inch square labeled "George Klein" only if Harry Smith is actually thinner than George Klein. In this way true statements about students are reinterpreted as true statements about two-inch squares.

Of course, in this example the entire argument is a bit contrived. If M is the standard universe for the calculus, however, then M^*, the nonstandard universe, is a remarkable and interesting place.

The existence of interesting nonstandard models was first discovered by the Norwegian logician Thoralf A. Skolem, who found that the axioms of counting—the axioms that describe the "natural numbers" 1, 2, 3 and so on—have nonstandard models containing "strange" objects not contemplated in ordinary arithmetic. Robinson's great insight was to see how this exotic offshoot of modern formal logic could be the basis for resurrecting infinitesimal methods in differential and integral calculus. In this resurrection he relied on a theorem first proved by the Russian logician Anatoli Malcev and then generalized by Leon A. Henkin of the University of California at Berkeley. This is the "compactness" theorem. It is related to the famous "completeness" theorem of Kurt Gödel, which states that a set of sentences is logically consistent (no contradiction can be deduced from the sentences) if and only if the sentences have a model, that is, if and only if there is a "universe" in which they are all true.

The compactness theorem states the following: Suppose we have a collection of sentences in the language L. Suppose in the standard universe every finite subset of this collection is true. Then there exists a nonstandard universe where the entire collection is true at once.

The compactness theorem follows

every finite subset of a collection of sentences of L is true in the standard universe, then every finite subset is logically consistent. So the entire collection of sentences is logically consistent (since any deduction can make use of only a finite number of premises). By the completeness theorem there is a (nonstandard) universe in which the entire collection is true.

A direct consequence of the compactness theorem is the "existence" of infinitesimals. To see how this amazing result follows from the compactness theorem consider the sentences:

"C is a number bigger than zero and less than $1/2$."

"C is a number bigger than zero and less than $1/3$."

"C is a number bigger than zero and less than $1/4$." And so on.

This is an infinite collection of sentences each of which can be written in the formal language L. With reference to the standard universe R of real numbers, every finite subset is true, because if you have finitely many sentences of the form "C is a number bigger than zero and less than $1/n$," then one of the sentences will contain the smallest fraction $1/n$, and $1/2n$ will indeed be bigger than zero and smaller than all the fractions in your finite list of sentences. And yet if you consider the entire infinite set of these sentences, it is false with reference to the standard real numbers, because no matter how small a positive real number c you choose, $1/n$ will be smaller than c if n is big enough.

The compactness theorem of Malcev and Henkin states that there is a nonstandard universe containing pseudo-reals R^* including a positive pseudo-real number c smaller than any number of the form $1/n$. That is, c is infinitesimal. Moreover, c has all the properties of standard real numbers in a perfectly precise sense: any true statement about the standard reals that you can state in the formal language L is true also about the nonstandard reals, including the infinitesimal c—under the appropriate interpretation. (The two-inch square labeled "Harry Smith" is not really thinner than the two-inch square labeled "George Klein," but the statement "Harry Smith" is "thinner than" "George Klein" is true, under our nonstandard interpretation of "thinner than." On the other hand, properties shared by all the standard real numbers may not apply to the nonstandard pseudo-numbers, if these properties cannot be expressed in the formal language L.

The Archimedean property (nonexistence of infinitesimals) of R can be expressed by using an infinite set of sentences of L as follows (we use the symbol "$>$" as usual to mean "is greater than"). For each positive element c of R all but a finite number of the sentences below are true:

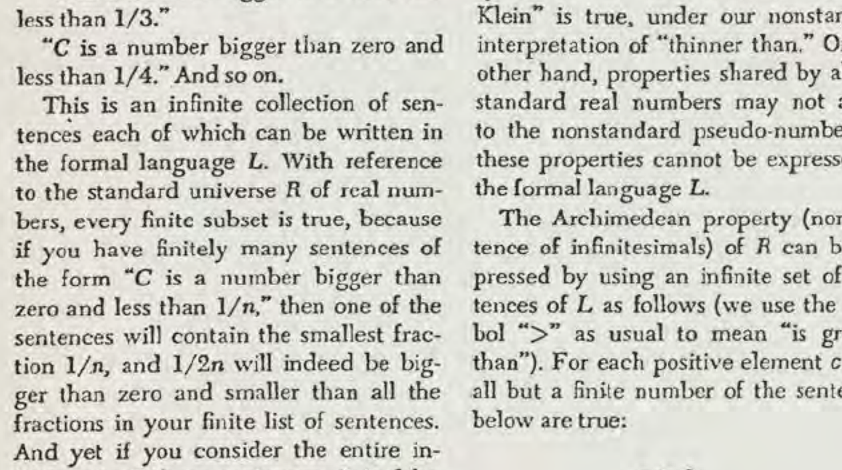
$$c > 1$$
$$c + c > 1$$
$$c + c + c > 1, \text{ and so on.}$$

This is not true, however, for the pseudo-reals R^*: if c is infinitesimal (hence pseudo-real), all these sentences are false. In other words, no finite sum of c's can exceed 1, no matter how many terms we take. The very fact that the Archimedean property is true in the standard world but false in the nonstandard one proves that the property cannot be expressed by a sentence of L; the statement we have used involves infinitely many sentences. It is precisely this distinction that makes the pseudo-objects useful. They behave "formally" like standard objects and yet they differ with respect to important properties that are not formalized by L.

Although the nonstandard universe is conceptually distinct from the standard one, it is desirable to think of it as an enlargement of the standard universe. Since R^* is a model for L, every true sentence about R has an interpretation in R^*. In particular the names of numbers in R have an interpretation as names of objects in R^*. We can simply identify the object in R^* called "2" with the familiar number 2 in R. Then R^* contains the standard real numbers in R, along with a vast collection of infinitesimal and infinite quantities, in which R is embedded.

An object in R^* (a pseudo-real number) is called infinite if it is pseudo-greater than every standard real number; otherwise it is called finite. A positive pseudo-real number is called infinitesimal if it is pseudo-smaller than every positive standard real number. If the pseudo-difference of two pseudo-reals is finite, we say they belong to the same "galaxy"; the pseudo-real axis contains an uncountable infinity of galaxies. If the pseudo-difference of two pseudo-reals is infinitesimal, we say they belong to the same "monad" (a term Robinson borrowed from Leibniz' philosophical writings). If a pseudo-real r^* is infinitely close to a standard real number r, we say r is the standard part of r^*. All the standard reals are of course in the same galaxy, which is called the principal galaxy. In the principal galaxy every monad contains one and only one standard real number. This monad is the "infinitesimal neighborhood" of r: the set of nonstandard reals infinitely close to r. The notion of a monad turns out to be applicable not only to real numbers but also to general metric and topological spaces. Nonstandard analysis therefore is relevant not just to elementary calculus but to the entire range of modern abstract analysis.

When we say infinitesimals or monads exist, it should be clear that we do not



ROLE OF FORMAL LANGUAGE in mediating between standard and nonstandard universes is portrayed. Formal language L describes the standard universe, which includes the real numbers of classical mathematics. Sentences of L that are true in standard universe are also true in nonstandard one, which contains additional mathematical objects such as infinitesimals. Nonstandard analysis thus makes the infinitesimal method precise for first time.

mean this at all in the sense it would have been understood by Euclid or by Berkeley. Until 100 years ago it was tacitly assumed by all philosophers and mathematicians that the subject matter of mathematics was objectively real in a sense close to the sense in which the subject matter of physics is real. Whether infinitesimals did or did not exist was a question of fact, not too different from the question of whether material atoms do or do not exist. Today many, perhaps most, mathematicians have no such conviction of the objective existence of the objects they study. Model theory entails no commitment one way or the other on such ontological questions. What mathematicians want from infinitesimals is not material existence but rather the right to use them in proofs. For this all one needs is the assurance that a proof using infinitesimals is no worse than one free of infinitesimals.

The employment of nonstandard analysis in research goes something like this. One wishes to prove a theorem involving only standard objects. If one embeds the standard objects in the nonstandard enlargement, one may be able to find a much shorter and more "insightful" proof by using nonstandard objects. The theorem has then been proved actually with reference to the nonstandard interpretation of its words and symbols. Those nonstandard objects that correspond to standard objects have the feature that sentences about them are true (in the nonstandard interpretation) only if the same sentence is true with reference to the standard object (in the standard interpretation). Thus we prove theorems about standard objects by reasoning about nonstandard objects.

For example, recall Nicholas of Cusa's "proof" that the area of a circle with a radius of 1 equals half its circumference. In Robinson's theory we see in what sense Nicholas' argument is correct. Once infinitesimal and infinite numbers are available (in the nonstandard universe) it can be proved that the area of the circle is the standard part of the sum (in the nonstandard universe) of infinitely many infinitesimals.

Here is how the falling-stone problem would look according to Robinson. We define the instantaneous velocity not as the ratio of infinitesimal increments, as L'Hôpital did, but rather as the standard part of that ratio; then ds, dt and their ratio ds/dt are nonstandard real numbers. We have as before $ds/dt = 32 + 16dt$, but now we immediately conclude, rigorously and without any limiting argument, that v, the standard part of ds/dt, equals 32. A slight modification in the Leibniz method of infinitesimals, distinguishing carefully between the nonstandard number ds/dt and its standard part v, avoids the contradiction, which L'Hôpital simply ignored.

Of course, a proof is required that the Robinson definition gives the same answer in general as the Weierstrass definition. The proof is not difficult, but we shall not attempt to give it here.

What is achieved is that the infinitesimal method is for the first time made precise. In the past mathematicians had to make a choice. If they used infinitesimals, they had to rely on experience and intuition to reason correctly. "Just go on," Jean Le Rond d'Alembert is supposed to have assured a hesitating mathematical friend, "and faith will soon return." For rigorous certainty one had to resort to the cumbersome Archimedean method of exhaustion or its modern version, the Weierstrass epsilon-delta method. Now the method of infinitesimals, or more generally the method of monads, is elevated from the heuristic to the rigorous level. The approach of formal logic succeeds by totally evading the question that excited Berkeley and all the other controversialists of former times, that is, whether or not infinitesimal quantities really exist in some objective sense.

From the viewpoint of the working mathematician the important thing is that he regains certain methods of proof, certain lines of reasoning, that have been fruitful since before Archimedes. The notion of an infinitesimal neighborhood is no longer a self-contradictory figure of speech but a precisely defined concept, as legitimate as any other in analysis.

The applications we have discussed are elementary, in fact trivial. Nontrivial applications have been and are being made. Work has appeared on nonstandard dynamics and nonstandard probability. Robinson and his pupil Allen Bernstein used nonstandard analysis to solve a previously unsolved problem on compact linear operators. It must nonetheless be said that many analysts remain skeptical about the ultimate importance of Robinson's method. It is quite true that whatever can be done with infinitesimals can in principle be done without them. Perhaps, as with other radical innovations, the full use of the new ideas will be made by a new generation of mathematicians who are not too deeply embedded in standard methods to enjoy the freedom and power of nonstandard analysis.

Afterburner

USAF NEWS FOR RETIRED PERSONNEL

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1990 COLAs SURVIVE BUDGET

Federal employees, federal retirees and social security beneficiaries will receive 1990 cost-of-living adjustments in January 2 paychecks. Many see the COLAs as generous, even unexpected, in light of the bitter deficit reduction fight between the president and the Congress last fall.

All but one of the traditional COLAs – a consensus 5.4 percent (4.7 last year) veterans disability compensation plus a dependency indemnity compensation (DIC) increase – failed approval in time for the fiscal 1991 budget. Fortunately, however, this may prove to be only a delay as Congress is expected to approve the increase in either March or April, retroactive to January. If this happens, the Air Force finance center will mail pay account statements to retirees and annuitants reflecting the adjustment including any changes as the result of the VA compensation COLA.

1990 COLAs

The 1990 COLAs appear below (1989 amounts shown in parenthesis):

- Most military retirees and annuitants: 5.4 percent (4.7). (The current amount of pay exempted from dual compensation reductions for retired Regular officers – $707.97 – also increases by the amount of the COLA.)
- Civilian federal retirees: 4.5 percent (4.7).
- Civilian federal employees: 4.1 percent (3.6).
- Social Security: 5.4 percent (4.7).
- Active duty: 4.1 percent (3.6).
- Congress also gets a pay raise. House members get a 25 percent increase to $125,100 but banned speaking fees. Senators get a smaller raise to $101,900 but can keep up to $26,568 in speaking and other fees.

Varying Rates

Military retirees who first entered active service before August 1, 1986 and whose retired pay is based on pre-January 1, 1990 pay scales receive the full 5.4 percent COLA increase, but those in this category whose retired pay is based on January 1, 1990 pay scales receive only a 4.4 percent increase. For those who first entered active service on or after August 1, 1986 and are now on the disability retired rolls, the following COLAs apply:

Retirement Date	Increase
Prior to January 1, 1990	4.4 percent
January 1-March 31, 1990	3.7 percent
April 1-June 30, 1990	2.2 percent
July 1-September 30, 1990	1.5 percent
October 1-December 31, 1990	0

An RSFPP annuitant whose RSFPP annuity was effective before March 20, 1974 will receive a 5.4 percent raise. Other RSFPP annuitants will receive no increase. The majority of SBP annuitants receive a 5.4 percent COLA, but SBP annuitants of retirees who entered active service after August 1, 1986 or retire after January 1, 1990 will receive less than the full 5.4 percent increase.

Annual federal retiree and social security COLAs are measured by the Department of Labor's Consumer Price Index. While the other federal COLAs are still tied to legislation, Congress increasingly favors measuring government pay raises by the same index, and may take steps toward an index conversion during the current session.

In 1963 Congress passed the cost-of-living adjustment law designed to protect military retired pay against erosion of benefits from increases in consumer prices. Since then, however, the annual COLAs have become less protective – and more confusing.

Because the COLA has generated so much mixed feelings over the years, *The Retired Officer Magazine* has published an article reviewing COLA legislation entitled "A String of Broken Promises," appearing in the December 1990 issue. The magazine has offered to mail retirees a free copy of the article on request. Please write *The Retired Officer Magazine*, 201 North Washington St., Alexandria, VA 22314.

In 1991, most federal employees get a 4.1 percent pay hike. Here's how past increases compare with average private-sector raises:

Federal Government		Private Industry	Federal Government		Private Industry
1980	7.0%	9.1%	1986	0 %	3.2%
1981	9.1	8.8	1987	3.0	3.3
1982	4.8	6.3	1988	2.0	4.1
1983	4.0	4.9	1989	4.1	4.1
1984	4.0	4.2	1990	3.6	4.5
1985	3.5	4.1			

Federal pay raises take about 15 months to catch up with private sector pay.

USAF News for Retired Personnel is authorized by AF Regulation 211-7. It is published in January, May and September by the Retiree Activities Branch, Air Force Military Personnel Center, to inform retirees and their surviving spouses of legislation, Defense policy and other matters affecting their military rights, benefits and obligations and to help them continue their association with the Air Force. Distribution: Air Force retirees receiving or awaiting eligibility to receive pay; annuitants of the Survivor Benefit Plan and/or the Retired Serviceman's Family Protection Plan, or the Reserve Component Survivor Benefit Plan; Air Force base personal affairs units; air reserve forces personnel offices; Air Force retiree activities offices; and, at their request, unremarried nonannuitant surviving spouses of deceased Air Force members who received retired pay. Additional copies are not available. Letters should be addressed to the Editor, HQ AFMPC/DPMARA, Randolph AFB, TX 78150-6001.

RETIREE COUNCIL REPORT

The Chief of Staff's Air Force Retiree Council held its 18th annual meeting last October at Randolph AFB, Texas. Included in the Council's agenda to the Chief were recommendations on these key retiree-oriented personnel issues.

Health Care: the Council endorses geographical area rather than centralized military health care management, allowing the local hospital commander direct involvement and providing greater responsiveness to individual care and efficient use of available funds. The Council recommended the Office of the Secretary of Defense develop legislation to amend Titles 10 and 42, U.S. Code, to enable the Health Care Financing Administration to reimburse OSD for health care services provided Medicare-eligible (over 65) military retirees. The Council also had recommendations for the Air Force Surgeon General.

COLAs: Cost-of-living adjustments should be fully equitable with all federal entitlements and not in any way single out the military retirement system. "Equity" is imperative, said the Council, both in fulfilling a responsibility to the current recipients and avoiding the negative impact that discriminatory treatment would have on recruitment and retention of quality Air Force people.

Survivor Benefit Plan: the Council expressed pleasure with the improvements in SBP since its establishment in 1972 and is keenly interested in the supplemental SBP scheduled to take effect April 1, 1992 including bigger payments to survivors age 62 or older. At the same time, the Council was of the opinion that the supplement, because it would be unsubsidized, would benefit too few retirees, those able to pay the significantly higher premiums to ensure a level benefit equal to 55 percent of the base amount proposed. The Council went on record favoring an option such as a level benefit greater than 35 percent of the base amount but less than 55 percent and at the current premium and subsidy levels and opposing increased cost of SBP participation.

Other Issues: Council stated its preference not to transfer the responsibility for payment and administration of military retired pay to the Department of Veterans Affairs, a proposal being considered by senior DOD officials and favored by VA. This opposition stems from the belief that such a transfer would not bring the VA to the current level of Air Force quality pay service and would also weaken the DOD and service advocacy with Congress. In short, DOD should continue to "take care of its own."

The Air Force Retiree Council was established in 1972 to represent an ever-growing retired population. Today the Council represents nearly 640,000 retirees, retired reservists, and widows in 15 geographical areas. Council area representatives and the Council chairman are volunteers who serve renewable 4-year terms of service. The chairman works closely with the retiree councils of the other service branches, all of which report directly to their Chief of Staff or equivalent.

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Four new Council representatives were recently appointed: Col. Theodore N. Mace, Area 1 – Alaska, Idaho, Montana, Oregon, Washington; Col. John R. Vincent, Area IX – Alabama, Louisiana, Mississippi, Tennessee; Lt. Col. William T. Dillon, Area X – Florida; Col. George C. Welch, Area XIII – Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont; and CMSgt. Frederick J. Ruggeri, Area XV – United States Air Forces Europe. ✦

AFAS EDUCATION GRANTS

The Air Force Aid Society awarded more than $3 million of educational aid for the 1990/1991 school year with grants of $1,000 to 3,058 sons and daughters of Air Force active members, retirees and deceased Air Force personnel. The Society expects to award more than 4,000 grants for the 1991/1992 school year.

Grant applications must include a complete financial statement. Last year more than 2,000 of the first 8,000 applications failed to include this vitally important report, automatically disqualifying the applicants from grant selection.

AFAS advises it is premature for families to disqualify themselves based on past experience with college financial aid systems. The Society has purposely tailored its program to adjust need measurements based on standards that fit the Air Force community as a whole.

The non-financial portion of the application is due AFAS by March 29. The financial statement is due April 12.

Applications for the 1991-1992 school year education grants can be obtained from the AFAS section of the nearest Air Force base Family Support Center or CBPO or by writing AFAS, 1745 Jefferson Davis Highway, Suite 202, Arlington, VA 22202. ✦

Sons and daughters of retired Air Force officers, warrant officers, career noncommissioned officers or their widows are eligible to apply for $1,500 interest-free loan scholarships for the 1991-1992 school year from the Retired Officers Association. Write TROA Scholarship Loan Committee, 201 N. Washington St., Alexandria, VA 22314-2529.

MORE NCOA JOB FAIRS SCHEDULED

The Noncommissioned Officers Association has scheduled its job fairs for the first part of 1991. Fairs offer retirees opportunities to meet and be interviewed by private employers interested in the talents offered by retiring military members.

NCOA job fairs scheduled: Jan. 11, Jacksonville, Fla.; Jan. 29, Ontario, Calif.; Jan. 31, San Diego; March 5, Tucson, Ariz.; March 8, Colorado Springs, Colo.; April 12, Charleston, S.C.; May 10, Arlington, Va; May 15 and 16, Heidelberg, Germany; June 6, Norfolk, Va.; June 26, San Antonio, Texas; July 9, Sacramento, Calif.; July 12, San Diego.

Job seekers are invited to contact the nearest NCOA Service Center for a copy of a sample resumè and for information on the time and location of job fairs in cities scheduled. You may also write NCOA, P.O. Box 33610, San Antonio, Texas 78265 or call (512) 653-6161 or (512) 653-7602. ✦

Nearly 2,500 years ago Plato, the Greek philosopher, said, "The punishment of wise men who refuse to take part in the affairs of government is to live under the government of unwise men."

DESERT SHIELD VOLUNTEER INQUIRIES

The Air Reserve Personnel Center at Denver received more than 1,600 inquiries from retirees after we announced the Desert Shield retiree recall policy in the September 1990 newsletter.

The Air Force is not recalling eligible retirees, but you may register as a potential volunteer if you have not already done so. *Mail* the following information to HQ ARPC/PMC, Denver, CO 80280-5000: your name, retired grade, Air Force skill specialty code (if known), social security number, home address and telephone number.

ARPC/PMC cannot accept phone inquiries due to its present heavy workload.

In the event there is a call-up, ARPC would contact retirees with the needed skills who meet age and medical requirements. (For an explanation of the Air Force recall policy, see following article.) ✦

ACTIVE RECALL POLICY

An Air Force retiree can be recalled to active duty even after having served 30 years or more. The likelihood of recall is extremely small, but remember that retirees can be called to serve their country in time of war or national emergency. Current laws provide for the involuntary recall of retirees to active duty with the Air Force. The Secretary of the Air Force must provide the authority to involuntarily recall retirees: In the case of retired reservists that authority cannot be provided except in time of war or once Congress declares a national emergency. However, the Air Force does not propose at this time to seek authority to recall any retirees involuntarily unless there has been a formally declared war or national emergency.

Selective Process

If authorized, retirees would be recalled on a highly selective basis to fill shortages by grade and Air Force specialty skill. Members would be used to fill positions in CONUS sustaining units vacated by members deployed to a theater or as theater replacements. The specific timing, duration and provisions of the recall would be determined by the contingency and the statutory authorities provided. Retirees with the most recent service (date of retirement) would be selected first in order to minimize the need for requalification training and exemptions for physical disqualification. Retirees over age 60, retired for disability or having a VA disability in excess of 30 percent, or residing overseas would be considered for recall on a case-by-case basis by the Air Force Military Manpower and Personnel Center. In addition, the authority to recall retired reservists is limited to those situations where the Secretary of the Air Force has determined with Secretary of Defense approval that there are insufficient qualified reservists available in other categories. The applications of qualified volunteers would always be welcome during such contingencies.

Regular Officers

Under Title 10 U.S. Code 688, retired Regular Air Force officers may be ordered to active duty voluntarily or involuntarily by the Secretary of the Air Force and assigned duties considered in the interests of national defense. No prior declaration of national emergency is necessary. The number of individuals who may be mobilized under this authority is unlimited and the length of the mobilization can be for an indefinite period.

The authority for involuntarily ordering retired reserve officers to extended active duty is 10 U.S. Code 672(a) and 675. Unlike the authority for the involuntary recall of a retired Regular officer, Title 10 U.S. Code 672(a) requires that the recall occur in time of war or of national emergency declared by Congress. An unlimited number of individuals may be called up under this authority and the mobilization is for the duration of the national emergency or war plus six months.

Regular Enlisted Members

Of all the retired categories, the mobilization vulnerability of retired Regular enlisted members to involuntary recall is the least understood. Regular enlisted members retiring with less than 30 years' total active and inactive service are assigned to the Retired Reserve. During the period of their assignment to the Retired Reserve they are vulnerable for mobilization both as members of the Retired Reserve (10 U.S. Code 675) and retired active-duty members (10 U.S. Code 688). Upon attaining 30 years of service these members are no longer subject to recall as reservists, but they remain vulnerable for involuntary recall according to 10 U.S. Code 688. ✦

RETURN OF DECEASED FOR BURIAL

A retiree who dies in an armed forces medical facility may be transported to the place of burial at government expense, but no farther than his/her last permanent residence. The retiree must have been properly admitted to the medical facility. Proper admission means being placed under treatment or observation and provided room, board and continuous nursing care in an area of the medical facility where patients normally stay at least overnight.

Transportation also is provided if the retiree dies while being transferred between armed forces medical facilities.

This entitlement applies only to locations in the continental United States, Alaska, Hawaii, Puerto Rico and Territories and Possessions of the United States.

Contact a military mortuary office for details. ✦

Delay announced for open season enrollment in Survivor Benefit Plan and supplemental annuity .... The January, 1990 issue of *Afterburner* announced SBP changes authorized by the FY1990 DOD Authorization Act to be effective October 1, 1991. Included were a supplemental annuity to eliminate the SBP payment reductions to spouses and former spouses age 62 or older and a one-year enrollment period. *New legislation has deferred implementation of both to April 1, 1992.*

Another feature of the 1990 Act required DOD to report on the possible impact of the open enrollment. The report could bring further changes. Therefore, details of the supplement and open enrollment will appear in a later issue of the newsletter. In the interim it is critical that retirees report address changes to the Defense Finance and Accounting Service (DFAS-Denver Center/RT, Denver, CO 80279-5000) to ensure receipt of important enrollment information and forms when they become available.

AIR FORCE CASUALTY ASSISTANCE

No one likes to discuss dying with their family; however, prior thought and planning will greatly assist your next of kin in the event of your death.

Please be sure your family members know to contact the Air Force. As soon as possible, a family member should contact the personal affairs unit at the nearest Air Force installation (see below). The casualty assistance representative will be available to provide your next of kin with benefits information, help file claims and initiate action for prompt payment of benefits. Your family should have available documents such as marriage and birth certificates, divorce decrees, adoption papers, retirement orders, DD Form 214, Report of Separation from Active Duty, and social security numbers.

If your next of kin encounter problems contacting a base casualty assistance representative, they may call the Air Force Military Personnel Center, Randolph AFB, Texas, phone (512) 652-5513 or in Texas 1-800-292-5642.

STATE/BASE	PHONE NUMBERS
ALABAMA	
Maxwell AFB	205-293-5048
ALASKA	
Eielson AFB	907-377-4231
Elmendorf AFB	907-552-3841
ARIZONA	
Davis-Monthan AFB	602-750-4456/4451
Luke AFB	602-856-7810
Williams AFB	602-988-5589
ARKANSAS	
Eaker AFB	501-762-7375
Little Rock AFB	501-988-6452
CALIFORNIA	
Beale AFB	916-634-2824
Castle AFB	209-726-4679
Edwards AFB	805-277-3137
George AFB	619-269-2219/2155
Los Angeles AFB	213-363-1235
March AFB	714-655-3592
Mather AFB	916-364-4381/2522
McClellan AFB	916-643-4050
Norton AFB	714-382-6071
Travis AFB	707-424-2106
Vandenberg AFB	805-866-4777/4778
COLORADO	
Lowry AFB	303-676-3086
Peterson AFB	719-554-4636
United States Air Force Academy	719-472-2133
DELAWARE	
Dover AFB	302-678-6068
DISTRICT OF COLUMBIA	
Andrews AFB	301-981-5156/6432
Bolling AFB	202-767-4466/5651
FLORIDA	
Eglin AFB	904-882-4395
Homestead AFB	305-257-7855/7856
Hurlburt Field	904-884-5280
MacDill AFB	813-830-3311/4611
Patrick AFB	407-494-6468
Tyndall AFB	904-283-2242/2616
GEORGIA	
Dobbins AFB	404-421-5058/5059
Moody AFB	912-333-3262/3415
Robins AFB	912-926-2000
HAWAII	
Hickam AFB	808-449-5882
IDAHO	
Mt Home AFB	208-828-6148
ILLINOIS	
Chanute AFB	217-495-3809
Chicago O'Hare IAP	312-694-6680/6681
Scott AFB	618-256-4694
INDIANA	
Grissom AFB	317-689-2237
KANSAS	
McConnell AFB	316-652-3776/3777
LOUISIANA	
Barksdale AFB	318-456-3520
England AFB	318-448-5701
MAINE	
Loring AFB	207-999-3113/2488
MARYLAND	
Fort George Meade	301-677-7704
MASSACHUSETTS	
Hanscom AFB	617-377-4227
Westover AFB	413-557-2539/3984
MICHIGAN	
K.I. Sawyer AFB	906-346-2323
Wurtsmith AFB	517-747-6558/6398
MINNESOTA	
Minnesota/St. Paul IAP	612-725-5517
MISSISSIPPI	
Columbus AFB	601-434-2722
Keesler AFB	601-377-2340
MISSOURI	
Whiteman AFB	816-687-6435
MONTANA	
Malmstrom AFB	406-731-3344/3132
NEBRASKA	
Offutt AFB	402-294-3715/2124
NEVADA	
Nellis AFB	702-652-9426
NEW JERSEY	
McGuire AFB	609-724-2439
NEW MEXICO	
Cannon AFB	505-784-2659/2658
Holloman AFB	505-479-7508
Kirtland AFB	505-844-1582
NEW YORK	
Griffiss AFB	315-330-4488
Plattsburgh AFB	518-565-5389
NORTH CAROLINA	
Pope AFB	919-394-2656/4308
Seymour Johnson AFB	919-736-6804
NORTH DAKOTA	
Grand Forks AFB	701-747-4904/4905
Minot AFB	701-723-4397
OHIO	
Wright-Patterson AFB	513-257-6002
OKLAHOMA	
Altus AFB	405-481-6764/6765
Tinker AFB	405-739-7283
Vance AFB	405-249-7249
PENNSYLVANIA	
Greater Pittsburgh AFB	412-269-8558/8559
SOUTH CAROLINA	
Charleston AFB	803-554-4518
Myrtle Beach AFB	803-238-7945
Shaw AFB	803-668-2196/3295
SOUTH DAKOTA	
Ellsworth AFB	605-385-2385
TENNESSEE	
Arnold AFS	615-454-3265
TEXAS	
Bergstrom AFB	512-369-2571
Brooks AFB	512-536-3324/3326
Carswell AFB	817-782-5744
Dyess AFB	915-696-3272
Goodfellow AFB	915-654-3310/3311
Kelly AFB	512-925-7667
Lackland AFB	512-671-3811
Laughlin AFB	512-298-5828/5079
Randolph AFB	512-652-2104
Reese AFB	806-885-3402
Sheppard AFB	817-676-4633
UTAH	
Hill AFB	801-777-2104/2367
VIRGINIA	
Langley AFB	804-764-2037/2038
WASHINGTON	
Fairchild AFB	509-247-5081
McChord AFB	206-984-3821
WYOMING	
F.E. Warren AFB	307-775-2344/3529

FOREIGN DIVORCE DECREES

Foreign divorce decrees of military members are being checked more closely for validity under U.S. law. Previously the Air Force would accept a foreign divorce decree as valid without question. Now, foreign divorce documents must be forwarded by an Air Force personnel office to the local base staff judge advocate for review and final agreement by the Military Personnel Center at Randolph AFB, Texas.

Foreign divorces are of doubtful validity when neither party to the divorce was a bona fide resident of the foreign country even though the laws of that country do not require residence or domicile as a condition for granting a divorce. Most U.S. courts hold that temporary presence in a country to establish domicile solely for obtaining a divorce does not give the foreign court authority to grant a divorce.

Establishing bona fide domicile is the major problem connected with a foreign divorce, and failure to do so may lead to a voided divorce – even after the military member's death – thus giving military benefits to someone other than the new spouse. The danger is illustrated by a case in Thailand when the retiree died and the divorce was declared invalid, and the former spouse was authorized full benefits and privileges as the retiree's widow despite the fact there were children in Thailand by the second wife.

Foreign divorce decree validation is essential for determining ID eligibility for military benefits and privileges and enrollment in the Defense Enrollment Eligibility Reporting System – DEERS. (Military ID cards are issued for military members and their families as well as former spouses based on appropriate legal documents and/or DEERS enrollment in certain cases.)

Anyone contemplating obtaining a divorce in a foreign country should be aware the divorce may be of doubtful validity for DEERS/ID card purposes.

YOUR ADDRESS: VITAL TO THE AIR FORCE

Undelivered mail is not always the fault of the U.S. Postal Service. Most Air Force retiree and annuitant mail problems are due to failure to promptly inform the Air Force of a new mailing address. The finance center maintains both your pay and correspondence addresses. Without a current address, delivery of *Afterburner* and other important correspondence (leave/earnings statements, retired pay deposits, tax information and Survivor Benefit Plan notices, etc.) can't be guaranteed.

First class mail is forwarded or returned to the sender by the post office. However, *Afterburner* goes both first class (to APOs, Hawaii and foreign countries) and third class (to continental U.S. addresses), but because third class mail can't be forwarded or returned, we have no way of knowing if your address is current. And even though you may have moved to a new address, your old address continues to trigger postage charges unless or until you or the post office notifies the finance center of a new address.

Include SSN

Important: The finance center can't research and change your address without a social security number, so please enter your SSN in all inquiries and address notices, including the official U.S. Postal Service address change notification card used by some correspondents. When you send a foreign address change, you must spell out the name of the country – a postal service requirement. If you don't, foreign mail might not be delivered.

Postage Increases

Postal charges are expected to jump next month, up 5 cents to 30 cents for domestic first class and from 16.7 cents to 18.5 cents for flat (no envelope) bulk rate third class. Of the more than 630,000 copies mailed this issue, thousands again went to foreign destinations at a cost of 90 cents per piece. Foreign mail postage remains the same.

To do its job right, the finance center must have the cooperation of all its customers. So please think twice the next time you intend to forward your new address, but don't. Remember, we have no way of knowing where you live if you don't keep the Air Force informed.

Sending your address change to the wrong place further degrades mail service. Please refer to Mailing Instructions at the bottom of the Address Change or Correction Notice on the back of the newsletter.

The Retiree Activities Branch can identify some 40,000 surviving Air Force spouses, but there may be twice that number. We have no way of really knowing. We'd like to send *Afterburner* to every eligible widow(er). If you know of a surviving spouse who has not remarried and does not receive the newsletter, please ask him/her to send us their name and address with the name, grade and social security number of their deceased spouse so that we can add them to our mailing list.

On a related matter, please help us keep accurate records by notifying the finance center of the death of an annuitant or the personal affairs unit at the closest Air Force installation if a retiree dies.

ACTIVE DUTY RECORDS INFO AVAILABLE

You can obtain information from your active duty records on file at the National Personnel Records Center at St. Louis. (NPRC does not accept phone requests other than to provide a recorded message with instructions for requesting information.) You can expect delays due to a large backlog of inquiries from veterans and retirees of all the military branches. Some requests may require a fee. All inquiries that are properly submitted are answered in the order received, but requests for records for urgent medical reasons have priority.

Standard Form 180

NPRC only accepts requests for information submitted on Standard Form 180, Request for Military Records. If you call, the recorded message makes this quite clear. This form is available from VA regional offices and hospitals and from base publications offices. Base retiree activities offices may also be of help obtaining the form. (If you need the phone number of your base's RAO, call us.)

NPRC inquiries may require extensive research or delays, especially when a member also contacts his congressman or a government agency at the same time asking for the same information. A postal return receipt or providing a pre-addressed Express Mail envelope can help speed the inquiry process. If you feel you should have already received a reply from NPRC, consider sending another SF Form 180 asking for the status of your inquiry and include a photocopy of the original request.

If you are in St. Louis and need to obtain information from your military records, check in with the NPRC security guard at the East entrance and ask to visit the research room. A National Archives and Records Administration employee will help you. NPRC is located at 9700 Page Blvd., St. Louis, MO 63132.

The NPRC commercial phone number for receiving recorded inquiry instructions is (314) 538-4243.

Note: Military dependents' medical records are forwarded by bases to the NPRC depository at 111 Winnebago St., St. Louis, MO 63118-4126 two years after the sponsor retires or separates from active duty.

THE CHAMPUS CATASTROPHIC CARE CAP

When Congress capped the total out-of-pocket expenses CHAMPUS families must pay for covered care in any one fiscal year (October through September), it limited the amount a family has to pay for CHAMPUS-covered care – $1,000 for active duty families, $10,000 for others.

The cap applies only to the amount paid to meet a family's annual deductible and cost shares, based on CHAMPUS allowable charges for covered medical care received in a fiscal year. Charges beyond those CHAMPUS determines to be reasonable or "allowable" for covered care or for charges for treatment not covered by CHAMPUS cannot be counted toward the cap, and no matter how high the charges, the member must pay all of those bills. Any CHAMPUS costs paid for the handicapped are not counted toward the cap.

The CHAMPUS explanation of benefits the claims processor gives with each claim tells how much has been applied toward your cost cap in any fiscal year. When the family deductible and cost shares add up to the cap amount, CHAMPUS will pay the full allowable charges for covered care during the rest of the fiscal year.

CHAMPUS supplement insurance can be of great help when CHAMPUS cost-sharing may leave a sizeable balance for you to pay as your share of total hospital bills. This insurance is available through military associations and insurance companies. Before buying, however, read the fine print to be sure a policy is convertible to Medicare coverage at age 65 with no increase in premiums, and gives continued coverage to your spouse when you die or he/she turns 65.

AFAFC CHANGES NAME

Item of Special Interest: The Air Force finance center advised in a September 1990 letter to retirees/annuitants that this month each of the military branch's accounting and finance centers would become a defense Financial Services Center. However, the name has since changed: Service finance centers are now part of the Defense Finance and Accounting Service. The new mailing address (also shown in Directory Assistance, on the back of the newsletter) is as follows:

For retired pay matters: DFAS – Denver Center/RT, Denver, CO 80279-5000.

For annuity pay matters: DFAS – Denver Center/RB, Denver, CO 80279-5000.

All other methods of inquiry and service including the toll-free phone number remain the same.

NEW RETIREE CONSUMER GUIDES

There still is no confirmation Air Force will publish the new U.S. military traveler's billeting guide as announced in an earlier newsletter. In its place we recommend Military Living's new illustrated *U.S. Military Installation Road Map* (with U.S. Possessions), available in base/post exchanges, service stations and even military clothing sales stores. A copy direct from the publisher costs $4.95. Write or call Military Living Publications, P.O. Box 2347, Falls Church, VA 22042, (703) 237-0203 .... The 1990-1991 edition of *Financial Aid for Veterans, Military Personnel and Their Dependents* is now available in base reference libraries. This is a very comprehensive and helpful source for education grants, loans, awards *and* internships. You can also order a copy, $38, from Reference Service Press, 1100 Industrial Rd., Suite 9, San Carlos, CA 94070, (415) 594-0743 .... If you don't have a copy of the *Retired Military Almanac,* you might want to order the 1991 revision, available in March. If it's not in your exchange store, you can send $5.45 ($6.55 first class mail) to Uniformed Services Almanac, Inc., P.O. Box 4144, Falls Church, VA 22044, (703) 532-1631 (for credit card orders call 532-1635). In our opinion, this is still the best researched and most reliable reference book of its kind. The new 216-page edition has information on benefits, entitlements, privileges and restrictions as well as detailed coverage of retired pay, military health care, CHAMPUS, VA and social security, legislation and other subjects including important information on federal and state taxes. The almanac is revised every year.

Internationalism does not mean the end of individual nations. Orchestras don't mean the end of violins .... Golda Meir, Former Prime Minister of Israel.

From the Top

The Future Air Force

"As we're pulled on one hand by strategy, on the other by the constricting budget," said Air Force Secretary Donald B. Rice, "a fundamental question emerges: what role will the Air Force play in a new world order? One that's the essence of air power – the ability to reach fast, far and overwhelmingly.

"The premium's on power projection. We could see new threats from smaller nations with the means to hurt us. The president will need tools to swiftly reach out with precision and hit hard. He'll need the ability to show force that causes an enemy to make a decision he wouldn't otherwise make. The quickest, most flexible, ocean-hopping, continent-spanning lethal force available to the president will be the Air Force. The Air Force of the future will have an agile, modernized combination of fighters, long-range bombers, tankers, airlift, and surveillance and communications assets. They'll have to be able to reach a trouble spot worldwide, clear the skies and strike in a matter of hours. These forces will have to travel light. We can't afford to drag monstrous logistics tails, which means new logistics concepts that do not presume prepositioned support at every base.

"Space assets will have to give users service on demand. The airlift question will be, 'what's the least amount of baggage we can deploy with?' Mobility skyrockets in importance if we end up with fewer bases overseas. Deterrence will remain the core of our national military strategy. Maybe the nuclear end game is becoming less likely; maybe arms agreements will cut the size of forces. But missile technology is proliferating and as long as any nation can threaten us, the U.S. will need nuclear deterrent forces.

"The president will need a strong active duty force at his immediate disposal. He'll also need our reserve components as a hedge against major power conflict. The nation will turn to its citizen-soldiers for a rapid expansion of force. As the Air Force responds to the new world scene, it's very important to me – and from discussions I've had with senior leaders in the Defense Department – it's clearly important to them – to protect the quality of our people and avoid hollow forces. The jury's still out on the size of the future armed forces. But even if it's leaner, ours will remain a superpower's Air Force."

The theme **Global Reach-Global Power** is frequently publicized in Air Force and public media to focus attention on the Air Force's national security role. A condensed version of this forward-looking concept by Air Force Secretary Donald B. Rice appears in an Air Force brochure available free from the Air Force Association. Also available is a 12-minute dramatized version of the secretary's concept in the form of a VHS video tape, for $6. For either or both of these offerings, please write Air Force Association, Communications Dept., 1501 Lee Highway, Arlington, VA 22209-1198. Assign checks to Air Force Association.

CONGRESSIONAL

Some benefits bills in the last Congress fell short of discussion time due mainly to the drawn out budget battle which lasted well past normal recess time. Others lacked sufficient co-sponsor support. Still others failed because of their price tags or funding mechanism; one such bill was heavily co-sponsored H.R. 303 (Bilirakis, R-Fla.), watched closely by the more than 300,000 retirees who hoped for legislation allowing concurrent receipt of both retired pay and VA disability compensation without offset to either by the other – a benefit already enjoyed by nonmilitary federal retirees. Last-minute efforts to repeal the current retired pay/VA comp offset were fruitless, and its author withdrew his bill so as not to raise false hopes. It's not likely similar legislation will be introduced in the 102nd Congress .... Another bill standing little chance of serious consideration by the new Congress is continued eligibility for CHAMPUS for retirees over age 65. The measure had meager support in the last session.

Former Spouse Protection Act

As anticipated in the previous newsletter, the FY1991 National Defense Authorization Bill includes two significant changes affecting the Uniformed Services Former Spouse Protection Act. It prohibits reopening divorce cases completed before June 25, 1981 (the date of the *McCarty* vs. *McCarty* Supreme Court decision) and also prevents division of veterans disability compensation by court divorce actions. It also redefines disposable retired pay to exclude taxes and other levies.

Please do not contact *Afterburner* for information about former-spouse legislation. If your base legal office can't help, you should ask an attorney.

New Issues

The 102nd Congress that convened this month is expected to pursue federal civil service pay reform to make government service more attractive and competitive; also, automatic COLA indexing that would in effect remove annual federal pay increases from the political manipulations of the past.... And there may be some delays and changes in the base closings program.... We might also see CHAMPUS changes to attract or require more people to use military treatment facilities as one means of reducing high annual CHAMPUS cost overruns.

Military Coalition Issues

With the last Congress already having approved waiver of earnings of officers who worked for the 1990 census and for federal disaster relief organizations, the military coalition and its member organizations are expected to continue to push for full repeal of the dual compensation laws affecting Regular officers. The coalition will seek termination of payment of retired pay to former spouses who remarry and will support subvention of Medicare funds to reimburse military and VA treatment facilities for care given Medicare-eligible members .... The coalition supports protection against so-called state source taxes for military retirees who have lived in one or more states but must continue paying taxes in their new state of residence .... Congratulations to The Retired Enlisted Association for its recognition as a congressionally chartered nonprofit organization. It joins 23 other coalition member organizations.

National Service

The country will be watching for implementation of the National Service Act of 1990 for involving young Americans in volunteer service to the nation, a bold concept along the lines of the Peace Corps in 1961 and, before that, the Civilian Conservation Corps of the 1930s, which helped reconstruct and beautify rural America. The CCC also contributed many of the first officers and enlisted men for World War II units.

As for universal military conscription, the president and Congress have expressed no interest in reviving the World War II military draft abandoned after 1972. All male Americans are presently required to register for selective service at age 18, but the president and Congress prefer, at least for the time being, to go along with an all-volunteer force.

New Tax Legislation

Here are some of the new income tax changes. Increased rates do not come into effect until the 1991 tax year. For the 1990 tax year, a couple filing jointly in the 28 percent marginal tax bracket will still pay the old 5 percent surcharge on income between $78,400 and $162,770 ($47,050-$97,620 for single filers), plus $11,200 for each personal exemption. The rate will drop back to 28 percent for any income over $162,770 ($97,620 for single filers). However, for the 1991 tax year, the top marginal tax rate will increase from 28 percent to 31 percent and remain at 31 percent. For couples filing jointly, the new 31 percent rate applies for all income above $82,150 ($49,300 for single filers).

Editor's Notebook...

New Honorariums Limits for Officers/Civilians. Under the Ethics Reform Act of 1989, military officers and civilian government employees who sometimes free-lance as writers or speakers may no longer accept payment for these activities after this month, including speeches, appearances or writings even on matters that are totally unrelated to one's official duties. (Enlisted members are already excluded.) However, there is proposed legislation that would relax the ban on receiving honorariums for activities unrelated to official duties.

Hale Koa Hotel Eligibility: DOD says yes, retired reservists awaiting retired pay at age 60 may now use the facilities of the Armed Forces Recreation Center and the Hale Koa Hotel on Waikiki Beach in Honolulu. For hotel reservations call 1-800-367-6027/28 or (808) 955-0555. For a brochure write the hotel at 2055 Kalia Road, Honolulu, HI 96815-1998.

Veterans Affairs. VA Hospitals are prepared to share care responsibilities with DOD, including chemical casualties, if hostilities break out in the Middle East . . . . Deteriorating physical therapy service illustrates VA's need for a better treatment capability. In September 1989 VA had 504 full-time physical therapist employees, with 105 vacant positions and a turnover rate of 26 percent. Although recent legislation provides much-needed salary adjustments for VA doctors, dentists and nurses, there will continue to be shortages. Some 20,000 VA hospital beds are empty due to inadequate resources and staff. By the year 2000, two of every three males over age 65 will be veterans, requiring VA to shift its focus from acute care to extended care and place greater emphasis on ambulatory and home health care . . . . At the close of fiscal 1989, 143 VA medical centers had more than 2,000 separate sharing agreements with 183 military medical treatment facilities. It's estimated VA provides health resources to the DOD on a reimbursable basis ratio of about 8:1 . . . . There are seven joint VA-military hospital construction projects in development. In addition to the Air Force clinic adjacent to the joint hospital in Albuquerque, N.M., similar ventures are planned with the Air Force in Las Vegas, Tucson and Anchorage . . . . If you have questions about government insurance there's a new toll free VA number, 1-800-669-8477 . . . . A 1986 law allows VA to recover its costs from private health insurance companies for certain veterans treated by the VA. The 1990 Omnibus Budget Reconciliation Act authorizes VA to recover the costs of care provided service-disabled veterans for treatment of nonservice-related health problems . . . . If you're eligible for the Montgomery GI Bill, limited flight training for a pilot career is available until October 1994. Students must hold FAA unlimited private certificates . . . . Do you owe the VA? The Veterans Benefits Amendment Act of 1989 permits some veterans to request reconsideration of indebtedness for any VA benefits overpayments . . . . A contract is on line for completion of the new San Joaquin Valley National Cemetery in California . . . . The VA home loan rate is back down again to 9.5 percent . . . . The 1990 Omnibus Budget Reconciliation Act struck down some longstanding veterans' benefits, including restoration of eligibility for Dependency and Indemnity Compensation (DIC) for surviving spouses whose marriages end in divorce, annulment or death (also applies to additional allowances for dependents); the $150 private cemetery burial allowance except for veterans who receive VA disability compensation or pension or who are destitute; and the $87 allowance for private tombstone markers. The new law also requires VA outpatient care co-payments from certain additional veterans who were formerly exempt . . . . Your VA regional office should be able to tell about changes in VA benefits.

At the BX and Commissary. The oldest Air Force commissary building? Bolling AFB (1939). Bolling also has the newest commissary. Kelly AFB has the second oldest (1940). The third oldest is in England, at RAF Upper Heyford . . . . The Army commissary at Fitzsimmons Army Medical Center in Denver has been transferred to the Air Force . . . . Commissary packaged food has new color labels to help selection for calorie content, cholesterol, etc. . . . . No more plastic bags. In a move to reduce the plastic and recycling problem, reusable canvas bags are supposed to be on sale in Air Force commissaries . . . . A by-product of the CONUS base closings/realignment issue may involve 21 exchange stores and 23 commissaries with the loss of 250,000 customers, also funds and major reductions of sorely needed dividends from exchanges and commissaries that help pay for new active duty MWR facilities . . . . Worldwide Army and Air Force Exchange Service sales for the first half of fiscal 1990 were $3.5 billion, an 8 percent increase over the same period last year. Comparable earnings decreased by $9 million due to AAFES absorbing the added costs caused by a weaker dollar against the German deutschmark . . . . Again, an official A.C. Neilsen price comparison survey shows base exchange prices compare very favorably with those in the commercial market: In 1990 BX prices were 23.2 percent less overall.

Health Care Advisory. CHAMPUS Notes: Among other changes, higher CHAMPUS annual deductibles go into effect April 1, the first increase in CHAMPUS' 24 years of existence: Current deductibles of $50 for one person, $100 for family will go up to $150 and $300 respectively. Implementation of the new rates will require payment adjustments for those who have already incurred costs since last October when the fiscal 1991 deduction was effective . . . . The cap, or limit, on how much members must pay for CHAMPUS-covered medical bills in a fiscal year remains $10,000 and will not be affected by the new CHAMPUS annual deductibles, above . . . . If you suffer injuries such as in an auto accident for which someone else shares responsibility, you must complete DD Form 2527 (Statement of Personal Injury – Possible Third Party Liability) to go with your CHAMPUS claim . . . . If you are admitted to a civilian hospital and stay in a private room, CHAMPUS can pay for the room only if your physician decides it's medically necessary . . . . Retirees become eligible for Medicare (Part A-Hospital) at age 65 and lose their CHAMPUS eligibility, but Medicare entitlement doesn't affect other family members' CHAMPUS eligibility . . . . When, in addition to your CHAMPUS benefits, you have a private health insurance policy that pays first for the cost of medical services, all private health plans, except those specifically designated as CHAMPUS supplements, pay first – before CHAMPUS – for civilian health care . . . . If you're CHAMPUS eligible and you need non-emergency hospital care while away from home on a trip, try to get a nonavailability statement from the nearest military hospital first. If that facility can't care for you, it should give you the statement after reasonably determining that you didn't make the trip simply to avoid using a uniformed services hospital near your home . . . . Note: Automated nonavailability statements are coming. Effective April 1, 1991, if you live near a military hospital you won't need to send in a nonavailability statement with your CHAMPUS claim for nonemergency inpatient care from a civilian hospital. The process will be automated, and the only valid nonavailability statements will be those entered electronically into the DEERS (Defense Enrollment Eligibility Reporting System) computer files. You'll still need to get the piece of paper from your nearby uniformed services medical facility's health benefits advisor, but you won't send it in with the claim as you have in the past. For statements issued before next April 1, the system will work as it always has, and you'll send it in with your claim . . . CHAMPUS shares the cost of certain cardiac rehabilitation programs for inpatient or outpatient care received on or after October 9, 1987 . . . . The 1.45 percent Medicare payroll tax for 1991 will be levied against a new base amount of $125,000 vs. $51,300 last year . . . . The 1991 Medicare Part B (doctor) annual deductible increases from $75 to $100 and the Part B monthly premium is now $29.90 . . . . The new Medicare handbook will be mailed only to new beneficiaries, but copies will be available at Social Security offices in March. (The July 1990 handbook is obsolete.) . . . . Wider use of military hospitals by members eligible for CHAMPUS is on the rise and being vigorously recommended by DOD to both improve care and reduce CHAMPUS' extremely high costs. Instead of CHAMPUS, which allows patients a wide choice of hospitals and doctors, DOD will offer programs in which patients may pay less for medicine if they agree to be treated only at military facilities, at private facilities under government contract or by networks of doctors who agree to rates set by the government. . . . A study of the effectiveness of the 1988 CHAMPUS Reform Initiative in Hawaii and California may result in extending the test program to Arizona, New Mexico and Nevada. CRI participating hospitals decide whether military doctors, civilian-contracted providers or a combination of both provides the best service and lowest cost to both the government and patient.

New MWR Charge Card. The Air Force says the new MWR card proposed for use in its morale, welfare and recreation activities is on schedule. When in full use it could save close to $4 million a year and eventually generate new funds for MWR programs. The card will also serve as a club membership card. The use of a credit card was recommended by an independent accounting firm . . . . MWR Survey: Watch for a survey asking MWR patrons for their opinion, part of a two-year Air Force study to be conducted at 80 bases evaluating their club and recreation facilities.

Privileges for Retired Reservists Awaiting Retired Pay at Age 60. So-called "gray area" reservists and their eligible family members need only show their ID cards indicating retired Reserve status or their current Reserve ID Card (DD Form 2AF (Res) or AF Form 447, Air Reserve Forces Dependent Identification Card) and a copy of the member's retirement order to use DOD exchange service stores, and all revenue-producing morale, welfare and recreation – MWR – facilities.

If dependents do not have an AF Form 447 they must be accompanied by the member to enter authorized facilities.

We will report any implementing instructions governing these privileges in *Afterburner* when they are published. In the meantime please check with the facility concerned if you have questions on the foregoing policy statement.

AFJROTC Instructors Needed. Retired Air Force officers and NCOs are needed to fill 75-100 anticipated vacancies at Air Force Junior Reserve Training Corps units (high school) nationwide. Applicants must have 20 years of active duty and not be retired more than four years. For information, contact John Edwards or Diane Jackson, HQ AFROTC, Instructor Management Branch, Maxwell AFB AL 36112-6663, (205) 293-7741.

Military Funeral Honors. The Air Force has a longstanding record of providing professional military funeral honors. According to the Air Force Engineering and Services Center, the growing retired Air Force population coupled with forthcoming base closures and major force reductions will adversely affect this capability. Funeral honors are performed in addition to a base's regular Air Force job responsibilities. An installation's capabilities are governed by the number of requests, the availability of enlisted members, vehicles, equipment, travel funds and the fulfillment of its assigned mission. The Air Force will continue to approve honors ceremonies to the extent possible.

Balancing the Budget. Remember President Reagan's hard-working Grace Commission that investigated government spending practices? A favorite quote of its chairman, Peter Grace, says, "The budget should be balanced. The Treasury should be refilled. Public debt should be reduced. The arrogance of officialdom should be tempered and controlled, lest we become bankrupt." Cicero said that in 63 B.C.

Civilian Retiree Councils. Civilian retiree councils are being established at six test bases to provide communication between the Air Force and civilian retirees and to reactivate the interest of former civilian employees in matters affecting the Air Force. One of the program's functions will be to interface with base military retiree activities offices. The six bases: Kelly AFB, Texas; Eglin AFB, Fla.; Lowry AFB, Colo.; McGuire AFB, N.J.; Offutt AFB, Neb.; and Homestead AFB, Fla.

. . . . By its very nature. "The underlying assumption is that language by its very nature is a growing evolving thing and, whereas it may be cultivated, it cannot be "fixed" without killing it. Like any other fundamental social activity, it will undergo vicissitudes that to the older generation often seem regrettable; and indeed, some changes in language turn out to be empty fads that are soon forgotten, like some changes in women's fashions. Others are found to be enduringly useful, so that a generation later it becomes hard to imagine how we got along without them." (American Heritage Dictionary).

JETWASH Reference the Air Force Locator article in the last issue, please note the following change. The Locator will release only the stateside addresses of active members. Overseas duty addresses and home addresses of active members, reservists and retirees will not be released. And remember, each time you write for Locator service, you may ask about only one person . . . . Colorado Ski Holidays offers discount ski vacations to the military community. For a brochure write Colorado Ski Holidays, Inc., 255 Doral Way, Colorado Springs, CO 80921, 1-800-729-5807 . . . . For authoritative information about possible trouble spots around the world call the State Department's Citizens Emergency Center, (202) 647-5225. A recorded message will give you a menu of country designations and you can punch in your travel destination on a TouchTone phone. If there are advisories, you'll hear specifics about civil unrest, natural disasters or outbreaks of disease.

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Seen and Heard: A common error is misusing the adjective myriad as a noun. Myriad objects appeared out of nowhere (correct); a myriad of objects appeared (incorrect) . . . . And two of the more commonly heard errors are realator for realtor; nucular for nuclear . . . . Volunteers Needed: The Air Force retiree activities program needs volunteers, particularly at bases supporting Desert Shield. If you have regular time to spare, you'll be welcome at base activities or the retiree activities office. For your RAO telephone number, call us . . . . The new Chief of Staff, Gen. Merrill A. McPeak, is, like his predecessors Generals Dugan and Welch, a former fighter pilot . . . . Car Talk: The National Safety Administration will talk to you about all aspects of car safety if you'll call 1-800-424-9393.

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A proposed expansion and modernization of U.S. Air Force Academy academic facilities is questionable due to declining accessions. By the 1995 academic year, reportedly only 1,000 new cadets will be accepted annually . . . . Section XV of the Fiscal 1991 Defense Authorization Bill establishes an Armed Forces Retirement Home, incorporating the present U.S. Soldiers' and Airmen's Home in the District of Columbia and the Naval Home in Mississippi. If you'd like more information, write USSAH, Attn: Administration Office, Washington, D.C. 20317 . . . . Unlike the other services, active duty Army and Air Force warrant officers and enlisted members have long contributed 50 cents a month from their pay (you didn't know?) to help support the USSAH. Now sailors, marines and coast guardsmen are required to do the same for the Naval Home . . . . Did you know West Point cadets were required to quell New York City rioting following announcement of the Emancipation Proclamation in 1863?

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Dependents of retirees may attend overseas DOD schools on a space-availability basis. Tuition rates are the same the world over, ranging from $3,177 for kindergarten to $6,932 grades 9-12 . . . . The origin of the World War II term GI is somewhat controversial. Some say it means government issue, others claim GI comes from a reference to galvanized iron or Can, GI, w/lid (which was government issued and shown in supply authorization lists) . . . . Planning to play in this year's Spaulding National Retired Military Golf Annual Tournament at Myrtle Beach, S.C.? If so, write now for an application to Myrtle Beach Golf Holiday, Box 1323, Myrtle Beach, S.C. 29578, Attn: Retired Military Golf Classic. The four-day event begins May 27 on the five courses of the Burning Ridge Club. Some 1,200 men and women golfers competed last year.

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Contributions are welcome for the military women's memorial at Arlington Cemetery, Va. For details write Women in Military Service Memorial, Dept. 560, Washington, D.C. 20042-0560 or call 1-800-222-2294 . . . . Federal health officials say alcohol is responsible for more than 100,000 deaths annually in the United States. The U.S. Center for Disease Control claims that in terms of life expectancy alcohol robbed each of those who died of about 26 years of life . . . . The average retiree is a 42½-year-old master sergeant with 22 years' service. Current average retiree ages: officers, 46.1; enlisted, 41.9 . . . . For retiring security policemen: The Air Force Security Police Association phone number is (512) 396-5444, or write 28 Willow Creek Circle, San Marcos, TX 78666.

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In the next (May) *Afterburner* we will show officers who retire after January 1, 1991 the new DOD standards of conduct restrictions that affect them if they work for defense contractors or DOD.

We have a choice. Humanity can learn to manage the risks of living together under a law system or can prepare to die together under the war system . . . . Myron W. Kronisch

MOVING TO TAX HAVEN STATE?

If you are thinking about changing your state of legal residence to Florida, Texas or one of the other so-called "tax haven" states that exempt military members from paying state income taxes, there are three legal prerequisites for changing your domicile. Unless you do all three, you remain a resident of your old state and liable for payment of taxes there.

You must intend to abandon your previous domicile, intend to establish a new one and be physically present in the new residence. You establish residence by living at a location with the intent to remain there indefinitely.

The domicile concept comes into play most frequently when a state sues for back taxes. While you might claim that Florida or Texas is your residence, a court of law in your old state might disagree, looking to the word "intend." What you say you intend to do and what you really intend to do might be different.

Some facts and circumstances a court will consider in determining your state of residence are: payment of taxes and fees; car registration; voting; transaction of business; banking; and ownership of property. Direct any questions to your old state's tax office and to the one where you wish to establish residence.

AIR FORCE ASSISTANCE FUND DRIVE

The 1991 Air Force Assistance Fund campaign will continue to support needy widows in the two retirement communities – Air Force Village in San Antonio, Texas, and the Air Force Enlisted Widows Home in Fort Walton Beach, Florida. A new fund beneficiary is the General and Mrs. Curtis E. LeMay Foundation, which provides direct support to indigent officer widows. Contributions also help the Air Force Aid Society offer education and emergency financial assistance to active duty and retired Air Force members and their eligible dependents. You can contribute by sending your check with the completed form below to 1991 AFAF Campaign, HQ AFMPC/DPMASC, Randolph AFB, TX 78150-6001. Contributions may also be made by convenient payroll deduction allotments by completing and signing Part B of the form below.

VA TAX LIABILITY CLARIFIED

The Department of Veterans Affairs has clarified two issues concerning tax liability for veterans who are entitled to VA disability compensation and also eligible for either retirement pay or disability severance pay from the military.

Normally, military retirement pay based on age or length of military service is taxable income and reported to the Internal Revenue Service. However, if all or a portion of your retirement pay is waived due to receipt of VA disability compensation, the taxable income is reduced by an amount equal to VA compensation. This means you'd normally pay less taxes based on a reduced gross taxable income.

However, VA officials have been informed that IRS was unable to credit some veterans who had waived their retired pay for VA compensation because the award letters provided by VA did not provide sufficient information for IRS purposes.

Affected veterans should refile for the exclusion by submitting a completed VA Form 20-8993 or an official VA letter granting retroactive benefits that clearly states "in lieu of VA Form 20-8993" with their annual Federal tax forms.

The second tax liability issue concerns cases where veterans have paid taxes on the total amount of disability severance pay awarded to them by the military and are subsequently awarded VA disability compensation. In these cases, VA is required to recoup the entire lump sum paid by the military, including the amount paid for taxes. This is generally accomplished by reducing monthly compensation payments by a set amount until the lump-sum military payment is reached.

Some retirees erroneously believe they are due a tax refund on that portion of the recoupment paid for taxes. IRS has determined, however, that disability severance pay is taxable income because it is received as a lump-sum payment rather than a monthly disability benefit. IRS has also concluded that no reduction in tax liability would occur if you were subsequently entitled to VA disability benefits for the same disability.

Questions concerning either of these tax issues should be answered by a VA regional office. Toll-free numbers are available in each state.

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1991 AIR FORCE ASSISTANCE FUND

Mail to: Air Force Assistance Fund
HQ AFMPC/DPMASC
Randolph AFB, TX 78150-6001

NAME *(Last, First, Middle Initial)*	GRADE	SOCIAL SECURITY NUMBER

IF CASH COMPLETE SECTION A
IF PDP COMPLETE SECTION B

A. CASH

Air Force Village Indigent Widows Fund (AFV)	$
Air Force Aid Society (AFAS)	$
Air Force Enlisted Widows Home (AFEWH)	$
The General and Mrs. Curtis E. LeMay Foundation (LeMAY)	$
TOTAL GIFT	**$**

B. PDP

(Remember – minimum allotment to any affiliate is $1.00 per month.)

Allotments effective June 1991

		MONTHLY ALLOTMENT	NUMBER MONTHS	TOTAL
AFV	Air Force Village Indigent Widows Fund T595130	$	× 12 =	$
AFAS	Air Force Aid Society T598092	$	× 12 =	$
AFEWH	Air Force Enlisted Widows Home T560696	$	× 12 =	$
LEMAY	The General and Mrs. Curtis E. LeMay Foundation T000270	$	× 12 =	$
			TOTAL PDP	$

PLEASE READ. I hereby authorize deductions from my monthly retired pay beginning June 1991 for a period of twelve (12) months in the amount shown to the affiliate(s) designated. This allotment will remain in effect for twelve (12) months unless I request in writing to DFAS-Denver Center/RT, Denver, CO 80279-5000 that it be stopped.

SIGNATURE

FOR AFO USE ONLY

CLASS "F" ALLOTMENT FOR CONTRIBUTION TO AFAF CAMPAIGN EFFECTIVE DATE 890601

PREPARED BY

Directory Assistance

Defense Finance and Accounting Service, Denver, CO 80279-5000, phone (303) 676-7051 or 1-800-525-0104 (MST); in Alaska and Hawaii 1-800-525-1089. For best service call early morning or late afternoon, 7:30 a.m.-4:15 p.m. After-duty hours calls are recorded for action next duty day. All pay action requests must be in writing showing SSNs and be signed. Please try to make these changes at a base finance office before calling or writing DFAS.
Directorate of Retired Pay Operations (DFAS-Denver Center/RT) manages the overall Air Force retired pay system. To waive retired pay for VA disability compensation, contact your VA regional office.
Survivor Benefits Division (DFAS-Denver Center/RB) manages the RSFPP/SBP annuity program.

HQ Air Force Military Personnel Center, Randolph AFB,TX 78150-6001.
Retiree Activities Branch (AFMPC/DPMARA), manages all Air Force retiree activities programs and publications. Write or call 1-800-531-7502 (CST), 8-11 a.m. and 1-4 p.m., Mon., Wed., Fri. In Texas call 1-800-292-5222. For information about Social Security, Veterans Administration, etc., contact the federal agency concerned.
Casualty Assistance Branch (AFMPC/DPMCAA). To report a retiree death or ask for casualty assistance guidance, write or call 1-800-433-0048 or (512) 652-5513; in Texas 1-800-292-5642.

Air Force Aid Society (AFAS), 1745 Jefferson Davis Hwy, Suite 202, Arlington, VA 22202, or contact an AF base AFAS office. Provides student education loans and emergency assistance.

Air Force Enlisted Widows Home Foundation. 571 Mooney Rd., Fort Walton Beach, FL 32548, (904) 863-4113/5 weekdays 8-4:30 p.m. (CST).

Air Force Historical Research Center, Maxwell AFB, AL 36112-6678. Air Force has a program for preserving its heritage. Welcomes documents/photographs of possible significance. Send item descriptions for evaluation to USAFHRC/AD. To request unit historical information, provide unit designation and appropriate dates to USAFHRC/QE.

Air Force Worldwide Locator Service, AFMPC/DPMDOO3, Randolph AFB, TX 78150-6001. Helps locate active and former service members. Free to military retirees.

Air Force Village Foundation, 5100 John D. Ryan Blvd., San Antonio, TX 78245-3502, (512) 677-8988 weekdays 8-5 p.m. (CST) or toll free 1-800-762-1122.

The General and Mrs. Curtis E. LeMay Foundation, 17050 Arnold Dr., Riverside, CA 92508. Phone (714) 697-2099/2000. Offers assistance to indigent widows of Air Force officers.

HQ Air Reserve Personnel Center (ARPC), Denver, CO 80280-5000. ARPC/DPAD maintains records of retired members of the air reserve forces (AFRES and ANG) not yet age 60. Write or call 1-800-525-0102, ext. 401, weekdays 7-4 p.m. (MST).

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), OCHAMPUS, Aurora, CO 80045-6900, (303) 361-3707, weekdays 7-4 p.m. (MST). Manages the civilian medical care program for active/retired members and families. Health Benefits Advisors (HBAs) at military treatment facilities also provide CHAMPUS information.

Defense Enrollment Eligibility Reporting System (DEERS), DEERS Support Office, Monterey, CA 93101, 1-800-538-9552, weekdays 6-6:30 p.m. (PST). In California call 1-800-334-4162. From Alaska and Hawaii call 1-800-527-5602. Maintains data on active/retired member and family eligibility for military benefits. Any military personnel office can make DEER system entries.

National Personnel Records Center, NPRC/NCPMF-C, 9700 Page Blvd., St. Louis, MO 63132-5100, (314) 538-4243, weekdays 7:30 a.m.-4 p.m. (CST). Caller receives recorded message only.

U.S. Soldiers' and Airmen's Home, Washington, D.C. 20317, 1-800-422-9988 (24 hours), or (703) 722-3337, 7:30-4 p.m. (EST) weekdays.

United States Air Force Museum, Wright-Patterson AFB, OH 45443-6518, (513) 255-3284 (EST). Researches, collects and exhibits aircraft and memorabilia depicting history of aerial flight.

Editor,
CMSgt. Arthur W. DeBaun, USAF, Ret.

Chief, Retirements and Separations Division, Col. Duane L. Conques

Chief, Retiree Activities Branch, Lt. Col. Charles J. Keller, USAF, Ret.

Chairman, Air Force Retiree Council
Maj. Gen. Travis R. McNeil, USAF, Ret.

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PRIVACY ACT OF 1974—Auth. Sec. 3012, Title 10 USC. Purpose: To change/correct correspondence address. Disclosure is voluntary. Failure to furnish change of address might result in eligible person not receiving **AFTERBURNER,** Forms W-2P and other correspondence.

ADDRESS CHANGE OR CORRECTION (Print or Type) Check appropriate block for your status:

☐ Retiree ☐ Reserve retiree not yet 60 ☐ Annuitant ☐ Nonannuitant

(1) Retiree name (Last, First, MI) [Always Complete] **Retiree SSN**

(2) Widow(er) Name (Last, First, MI) **Widow(er) SSN**

Street Address

City **State or Country (write out country in full)** **ZIP Code**

Signature: **Grade:** **Date:**

Mailing Instructions:

Retiree receiving retired pay: mail form to DFAS-Denver Center/RMDR, Denver, CO 80279-5000 or ask an AF finance office to make change. **Reserve retiree not yet 60:** mail to ARPC/DSFS, Denver, CO 80280-5000. **Annuitant:** mail to DFAS-Denver Center/RMDR, Denver, CO 80279-5000. **Nonannuitant:** mail to AFMPC/DPMARA, Randolph AFB, TX 78150-6001.

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HQ AFMPC/DPMARA
RANDOLPH AIR FORCE BASE, TX 78150-6001

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USAF NEWS FOR RETIRED PERSONNEL

VOL. 34 NO. 2 AFRP 30-16 MAY 1992

DECISION AFFECTS RETIREES

The U.S Supreme Court unanimously ruled in late April that states may not tax the pensions of U.S. military retirees while exempting comparable benefits for retired state and local government employees.

This decision may affect military retirees and their beneficiaries in some 12 states: Arizona, Arkansas, Georgia, Iowa, Montana, Oklahoma, Utah, Colorado, Virginia, Wisconsin, Massachusetts and South Carolina.

States have already collected hundreds of millions of tax dollars from military and other federal retirees. The Supreme Court did not, however, resolve the question of whether the states that have collected these taxes in the past must now refund that amount to taxpayers. There are other cases now pending before the Supreme Court which directly raise the issue of refunds.

The latest ruling is styled Barker v. Kansas, and was brought by approximately 14,000 military retirees and beneficiaries in Kansas who sought a declaratory judgement that the Kansas state income tax discriminated against them in favor of state and local government retirees. They also requested a permanent injunction to prohibit any further assessment of the tax, and the group sought refunds for tax years 1984 through 1989.

The Kansas State Supreme Court had held that military retired benefits were actually reduced pay for reduced current services, since federal military retirees remain members of the armed forces of the United States after they retire from active duty; they are retired from active duty only but are still subject to the Uniform Code of Military Justice.

The Kansas court contrasted that to state and local government retirement benefits, which, according to the lower court, constituted deferred compensation. It was that "significant difference" which the court said justified the differential treatment.

In an opinion written by Justice Byron White, the Supreme Court acknowledged that military retirees unquestionably remain in the service and are subject to restrictions and recall, but held that those differences standing alone do not justify the differential tax treatment at issue in this case.

The Supreme Court rejected Kansas' characterization of military benefits, noting that military pensions are based on years of service and rank obtained prior to retirement and were determined in a manner very similar to that of the Kansas Public Employee Retirement System. As such, the Supreme Court held such dissimilar treatment violated a federal law which authorizes states to tax federal employees' compensation if the taxation does not discriminate against the employees because of the compensation's source. ✦

SBP OPEN ENROLLMENT CONTINUES

Several thousand new Survivor Benefit Plan elections became effective April 1, 1992, the opening date of the open enrollment. The numbers continue to grow.

The Air Force Military Personnel Center's Retiree Activities Branch, the Defense Finance and Accounting Service, Denver, and base-level personnel offices have received thousands of telephone and written inquiries about SBP.

Individuals who have been unable to contact one of these information sources, are asked to be patient and keep trying. For more SBP details, see page 3.

PHONE NUMBER CHANGE

The Retiree Activities Branch toll-free SBP open enrollment hotline has been changed to 1 (800) 642-6916, effective May 26, 1992.

If you're still working with the information and forms contained in the February Afterburner, please change the toll-free number shown on page 2 to reflect the new number. The commercial number remains the same, 512 652-2295. ✦

DIRECT DEPOSIT PROGRAM

Nearly three years ago, the Air Force implemented a policy requiring mandatory participation in the Direct Deposit Program for all new retirees. Annuitants and those members retiring prior to Sept. 1, 1989, were excluded from mandatory participation. However, all retirees and annuitants should consider participating in direct deposit as it benefits everyone.

Benefits include increased security by eliminating lost or stolen checks, having the money available the morning of the payment date, and alleviating the time and expense of making special trips to deposit or cash checks. Benefits to the Department of Defense include reduced operating costs; implementation of a highly dependable, efficient payment and tracking system; and improved customer service in responding to pay inquiries.

To participate in the Direct Deposit Program, complete a Standard Form 1199A, Direct Deposit Sign-Up Form, which is available from your base finance office. A finance representative will assist you in completing the form, and they will forward it to the Defense Finance and Accounting Service-Denver Center.

Afterburner
USAF NEWS FOR RETIRED PERSONNEL

Editor,
Bill Turner

Chief, Retirements and Separations Division, Col. L. Dee Miller

Chief, Retiree Activities Branch Charles J. Keller

Chairman, Air Force Retiree Council
Maj. Gen. Travis R. McNeil, USAF, Ret.

USAF News for Retired Personnel **is authorized by AF Regulation 211-7. It is published in January, May and September by the Retiree Activities Branch, Air Force Military Personnel Center, to inform retirees and their surviving spouses of legislation, Defense policy and other matters affecting their military rights, benefits and obligations and to help them continue their association with the Air Force. Distribution: Air Force retirees receiving or awaiting eligibility to receive pay; annuitants of the Survivor Benefit Plan and/or the Retired Serviceman's Family Protection Plan, or the Reserve Component Survivor Benefit Plan; Air Force base personal affairs units; air reserve forces personnel offices; Air Force retiree activities offices; and, at their request, unremarried nonannuitant surviving spouses of deceased Air Force members who received retired pay. Additional copies are not available. Letters should be addressed to the Editor, HQ AFMPC/DPMARA, Randolph AFB, TX 78150-6001**

NEED FOR TEACHERS EXPECTED

Retirees interested in starting another career may want to consider teaching. By the year 2000, the United States is expected to need 65,000 more teachers, an increase of 30 percent — 285,000 teachers, as compared to 1991's 220,000.

State certification requirements often frustrate people who want to make teaching a second career, but alternative certification programs help remedy that problem.

Currently, 30 states offer some type of alternative certification approach: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia.

Also, Idaho, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia and West Virginia.

State certification programs can be completed in as little as a year or may take three years, depending on the state's requirement. Information on teaching as a second career is available through installation education offices, state certification offices or by writing to:

U.S. Dept. of Education
Office of Intergovernmental and
Interagency Affairs
Room 3073
400 Maryland Ave., S.W.
Washington, DC 20202 ✦

ABOUT THE EDITOR

Bill Turner, who became editor of the Afterburner in October, has been in and around the Air Force and Air Force publications for more than 30 years.

After entering the Air Force as an airman basic trainee, he served 16 years as an enlisted person, attaining the grade of senior master sergeant before earning his commission through Officer Training School. He retired from the Air Force as a captain in December 1981 after 10 years of commissioned service. Following a year of just "goofing off" he started to work as a federal employee. The new editor has a bachelor of arts degree in history and a master of arts degree in human relations. He also completed the Defense Information School's basic, advanced and officers' public affairs courses and advanced courses in communication at the University of Oklahoma.

MORE SBP REMINDERS

Have you received your open enrollment information? Retirees who have moved and new retirees who didn't receive the February **Afterburner** with comprehensive open enrollment information, should contact AFMPC/DPMARA at toll-free 1 (800) 642-6916, which is effective May 26.

Have you made an open enrollment election? Many retirees overlooked Item 11 on DD Form 2618, the open enrollment election form, which is to record a retiree's choice for Supplemental SBP, whether yes or no. If none of the blocks are marked, the assumption is that the person doesn't desire SSBP coverage.

Retirees who submitted an election and would like to buy SSBP but didn't mark Item 11, should contact AFMPC/DPMARA immediately for assistance. If you haven't submitted your election yet, be sure to complete Item 11, whatever your SSBP choice, so that DFAS-DE will properly record your election.

Special note for reservists: The February **Afterburner** recommended that retirees, other than gray area reservists, who are considering purchasing Supplemental SBP, ask AFMPC/DPMARA or the personal affairs office at the nearest Air Force installation for an estimate of the Social Security offset that will be applied to their spouse's SBP annuity.

Unfortunately, the Social Security offset computation program used by DPMARA and the CBPOs does not lend itself to offset computations based on non-regular service. Therefore, reservists receiving retired pay who wish to obtain an offset estimate need to provide the following information to DFAS-DE/RTBR, Denver CO 80279-5000: the retiree's name and Social Security number; the age at which the retiree began (or will begin) to receive Social Security; the retiree's and spouse's birth dates; and either a statement showing the inclusive dates for each period of the retiree's active duty or active duty for training performed after 1956 and the retiree's grade for each period served, or a list of the retiree's military earnings for service performed after 1956.

Those requesting an offset computation are asked to be patient. DFAS-DE is processing thousands of new elections but will provide your estimate as soon as possible.

Have you kept DFAS-DE informed of changes in the status of your dependents? A number of retirees have called DPMARA to ask about purchasing SBP spouse coverage and were surprised to learn they already are covered. These retirees had previously elected spouse coverage, that marriage ended, and the retiree remarried but didn't notify DFAS-DE of the remarriage.

Remember, an election for spouse coverage covers not only the spouse married to the retiree on the date of election but any subsequently acquired spouse unless the retiree elects before the first anniversary of remarriage not to resume coverage. Failure to notify DFAS-DE of the loss of a spouse will result in an over-deduction of premiums (premiums deducted during the period there is no eligible beneficiary may be refunded subject to the six-year statute of limitations).

On the other hand, failure to notify DFAS-DE of remarriage will result in an indebtedness for the retiree who has suspended spouse coverage. To ensure your retired pay account is kept current, notify DFAS-DE/RT, Denver CO 80279-5000 of beneficiary changes as soon as they occur.

Are you an RSFPP participant? If you have RSFPP coverage for your spouse, you won't be required to pay a premium addition for any new SBP spouse coverage. Important things to remember about RSFPP: It covers only the family members who were dependent on you on the date you retired. Therefore, a spouse or child you acquired after retirement is not eligible to receive an RSFPP annuity. Also, RSFPP premiums and annuities are not subject to cost-of-living adjustment — they are a fixed percentage of the retired pay you were entitled to on your retirement date. ✦

TRUTHS TO FREQUENTLY CITED MYTHS

In spite of many significant improvements to the SBP since it started in 1972, many people summarily reject the program — not because they've spent time analyzing it, but because of myths that continue to be perpetuated. To allow you to review SBP with an open mind, the myths most frequently cited and their corresponding truths are provided below:

Myth — You have to pay for SBP whether or not you have a spouse.

Truth — That was true in 1972; the law was amended in 1976 to allow premiums to be suspended upon the death or divorce of a spouse. If the retiree later remarries, the only increase in premiums results from COLA increases during the period the coverage was suspended; the member's retired pay and survivor's potential annuity also increase proportionately. The member is not charged additional premiums because of advanced age or failing health.

Myth — SBP costs 50 percent of retired pay.

Truth — The maximum premium for standard SBP for new retirees is 6.5 percent of the base amount, and the most an open enrollment participant will pay, considering the premium addition, is 11 percent. Please see the section on computing premiums in the February Afterburner. Remember, the government subsidizes SBP, which makes the plan more affordable for all. ✦

NEWS BRIEFS

Retirement pay waiver — Spouses (or other next of kin) of Air Force retired members who waived their Air Force retirement pay to receive civil service retirement pay or Veterans Administration disability compensation are reminded to notify the Air Force upon the death of the retiree. That's so the Air Force pay account, although not active, can be closed.

Most importantly, this notification will allow the Air Force to appoint a casualty assistance representative to assist the next of kin in applying for survivor benefits and entitlements.

DD Form 214 — If you think you're missing a DD Form 214, check the discharge date; you may not be missing it after all. Beginning in September 1979, a DD Form 214 was not issued when an Air Force member was discharged for immediate reenlistment.

For those of you who have a legitimate need for a replacement copy of a DD Form 214, see the Directory Assistance page in this issue.

Women's Memorial — In 1986, Congress authorized a memorial to women in our armed forces. It will be located at the memorial gate of Arlington National Cemetery in Washington, D.C. A primary feature of the Memorial is a computer register of women who serve or have served and will include details of each woman's career and her photograph. The cost of registration is $25.

Please help in the nationwide search to locate the 1.2 million women veterans so that their names may be entered in this historic roll of honor. Call 1-800-222-2294 for information on registration or on how you can serve as a volunteer field representative.

Retired Military Almanac — The 1992 Retired Military Almanac, which was published in March, contains current, useful information for retired military members. In addition to a listing of retired pay and activities offices, the book has complete listings of military and veterans health care facilities along with detailed information on how to obtain health care from CHAMPUS, Medicare and other sources. It lists military facilities showing the availability of temporary quarters, golf courses, exchanges, commissaries, and recreation areas; includes federal and state tax data for retirees; information on the Survivor Benefit Plan, military retirement residences and listings of associations and organizations for retirees.

The almanac can be purchased from most military exchange stores or can be ordered directly from the publisher by sending $6 ($7.10 for first class mail) for each copy to: Uniformed Services Almanac, Inc., P.O. Box 4144, Falls Church, VA 22044. Specify that you're ordering the 1992 Retired Military Almanac. Call (703) 532-1631 to place credit card orders (first class mail only).

Blinded Veterans Association — Nearly 120,000 people in the United States become legally blind each year. Many of them are veterans of the U.S. armed forces who are unaware of assistance programs offered by the Blinded Veterans Association. The BVA was organized in 1945 and chartered by the U.S. Congress in 1948 as a non-profit service organization and advocate of the blinded veteran.

The BVA has six field service representatives in offices located throughout the country. They are experienced counselors, knowledgeable about Department of Veterans Affairs, state and local programs to assist blind veterans. Membership in the BVA is not a prerequisite for services. For more information, call the BVA at 1-800-669-7079 and leave a message.

(See related story on page 5)

RETIREE COUNCIL MEETS

The Air Force Retiree Council held its annual meeting in October at the Air Force Military Personnel Center, Randolph AFB. As in past years, the meeting was attended by the Army, Navy and Coast Guard Council chairmen and Marine Corps co-chairman.

Chairman of the Air Force Retiree Council retired Maj. Gen. Travis R. McNeil, in his report to the Air Force chief of staff, said the presence of the other council chairmen "gave us the opportunity to be briefed and discuss the impact of the 'build down' of military forces, to air common concerns for the future, and to collectively dedicate our efforts to ensure the availability of military retiree resources in the event of partial or full mobilization. It also afforded the opportunity to discuss a coordinated approach to DOD in a number of selected areas of concerns."

Members unanimously reported that health care for retirees and their family members is the number one priority — this is a particular concern for retirees who depend on military treatment facilities at bases scheduled for closure.

As more installations are closed as a result of budgetary cuts and reorganization/restructure, more retirees will have to travel greater distances to avail themselves of base services which, in turn, find themselves trying to serve larger populations.

Another health related concern receiving the attention of the council is the possibility that the Medicare age may be lowered to 60 instead of 65 as it is now. Should that take place, thousands of military retirees will no longer be eligible for medical care under CHAMPUS.

A few of the recommendations made to the Air Force chief of staff are:

* The chairpersons of the individual service retiree councils rotate in a membership position on the DOD Commissary Board. After all, about 50 percent of commissary customers are retirees.

* The chairman of the Air Force Retiree Council be appointed as a voting member of the Air Force MWR board.

* The chairperson of the services' retiree councils be urged to attend the White House Conference on Aging.

* Future cost-of-living adjustments, as a minimum, should be fully equitable with all federal entitlements and the military retirement system should not be singled out. Although the COLA was not an issue this year, the continuation of COLAs remains a serious concern to retirees.

WWII 50TH ANNIVERSARY COMMEMORATION

The Department of Defense will commemorate the 50th anniversary of World War II through 1995. Throughout this period, the war will be commemorated nationally and internationally at a time of unprecedented change in the world order, changes paralleling those that occurred at the end of WWII and resulting from the events of the war.

The objectives of the DOD program are to:

* Honor the veterans of World War II and the sacrifices made on the homefront by the American people;

* Provide the public with a clearer understanding and appreciation of the enduring lessons of the war;

* Acquaint the postwar generations with the war as the central highlight of the 20th Century and the reasons why it was fought; and

* Highlight the advances in technology, science, and medicine from military research during the war.

During the commemorative period, many activities will be planned and presented by civic and military organizations. These activities will range from community-level events to major battle site commemorations and exhibits sponsored by private and public agencies.

Commemorative events of national significance include:

January 1992 - December 1995 — The Homefront and Industrial Mobilization

May 4-8, 1992 — Battle of Coral Sea
June 6, 1992 — Battle of Midway
March 20, 1993 — Battle of the Atlantic ends
Sept. 9, 1993 — Battle of Salerno, Italy
June 6, 1994 — Normandy landings
May 8, 1995 — Victory in Europe
Sept. 2, 1995 — Victory in Japan

Helen E. LeMay

Helen E. LeMay, widow of Gen. Curtis E. LeMay and co-founder of the LeMay Foundation, died Feb. 16 of heart failure at her home in Riverside, Calif. She was 83 years old.

It was in 1987 that the LeMays started the LeMay Foundation, a non-profit organization dedicated to helping Air Force officers' widows facing severe financial problems.

Much earlier, General and Mrs. LeMay developed and started the Family Services Program, a relocation assistance program that began at SAC and was later adopted throughout the Air Force.

RETIREE VOLUNTEERS HONORED

The following retiree activities offices and volunteers have been awarded the Air Force Certificate of Appreciation for outstanding contributions in 1991. All are Air Force retired unless otherwise indicated.

1991 Outstanding Retiree Offices

Sheppard AFB, Texas, Air Training Command; RAF Upper Heyford, U.S. Air Forces in Europe; Peterson AFB, Colo., Air Force Space Command; Barksdale AFB, La., Strategic Air Command; Hanscom AFB, Mass., Air Force Systems Command; Wright Patterson AFB, Ohio, Air Force Logistics Command; Charleston AFB, S.C., Military Airlift Command; Niagara Falls IAP N.Y., Air Force Reserve.

1991 Retiree Volunteers of the year

Air Force District of Washington — Lt. Col. Robert Wilson, Bolling AFB.

Air Training Command — CMSgt. Gino Conti, Columbus AFB, Miss.; SCPO Melvin Webster, USN retired, Chanute AFB, Ill.; CWO Tullus Castor, U.S. Army retired, Keesler AFB, Miss.; Lt. Col. Carl Davidson, Lackland AFB, Texas; Maj. William Skinner, Lowry AFB, Colo.; Maj. Charles Simmons, Mather AFB, Calif.; CMSgt. Reed Switzer, Randolph AFB, Texas; Lt. Col. John Greiner, USA retired, Reese AFB, Texas; MSgt. James Esther Jr., Sheppard AFB, Texas; MSgt. Albert Ray, Vance AFB, Okla; CPO Charles Roane, U.S. Navy retired, Williams AFB, Ariz.

U.S. Air Forces in Europe — Lt. Col. Dow Kirkland, Lindsey AS, Germany; MSgt. Roland Barber, RAF Upper Heyford, United Kingdom; MSgt. Allen Zai, Iraklion AS, Crete.

Tactical Air Command — MSgt. William Anderson, Avon Park Range, Fla.; Col. Vernon Case, USA retired, Bergstrom AFB, Texas; Mrs. Ilse Harbour, Cannon AFB, N.M.; Lt. Col. Fred Zimmerman, USA retired, Davis-Monthan AFB, Ariz.; Senior Chief Yeoman Mary Coslett, USN retired, Holloman AFB, N.M.; Lt. Col. John Sisak, Homestead AFB, Fla.; Mrs. Leta Hayden, Luke AFB, Ariz.; Ms. Fran Dozier, MacDill AFB, Fla.; Mr. Robert Bennett, Moody AFB, Ga.; MCST Wayne Moberg, USN retired, Mt. Home AFB, Idaho; Mrs. Marie Gerty, Myrtle Beach AFB, S.C.; Mrs. Antoinette "Henny" Carlisle, Seymour Johnson AFB, N.C.; CMSgt. Clarence Longberry Jr., Shaw AFB, S.C.; Mrs. Genevieve Kulas, West Palm Beach, Fla.; Ms. Betty Pool, Tyndall AFB, Fla.

Air Force Reserve — TSgt. Michael Bocchicchia, Niagara Falls International Airport, N.Y.; Maj. William Holt, O'Hare International Airport, Ill.; MSgt. Rudolph Long, Westover AFB, Mass.

Air Force Space Command — Mrs. Teresa Tourney, Patrick AFB, Fla.; Lt. Col. Raymond Vavrinek, Peterson AFB, Colo.

Strategic Air Command — Col. Steven dePyssler, Barksdale AFB, La.; Col. Warren Stone, USA retired, Beale AFB, Calif.; Lt. Col. Sam Stewart, USA retired, Carswell AFB, Texas; MSgt. Manny Sanchez, Castle AFB, Calif.; Brig. Gen. Bill Neitz, USA retired, Dyess AFB, Texas; Sgt. Maj. Joe Egger, USA retired, Ellsworth AFB, S.D.; Lt. Col. Andrew Kelly, Fairchild AFB, Wash.; Lt. Col. John Knop, Grissom AFB, Ind.; Maj. and Mrs. Curtis Mirgon, Malmstrom AFB, Mont.; Lt. Col. Robert Donohue, March AFB, Calif.; CMSgt. and Mrs. Laurie Gibbs Jr., McConnell AFB, Kans.; SMSgt Sidney Reade, Offutt AFB, Neb.; MSgt. Walter Mills, Whiteman AFB, Mo.; CMSgt. Kenneth Ratliff, Wurtsmith AFB, Mich.

Air Force Logistics Command — Chief Gunners Mate Everette "Bud" Artis, USN retired, Tinker AFB, Okla.; Mrs. Lyn Harris, McClellan AFB, Calif.; Lt. Col. Ross Strode, Wright-Patterson AFB, Ohio; SMSgt. Stephen Kimball, Robins AFB, Ga.

Military Airlift Command — Mrs. Mimi Gilbert, Charleston AFB, S.C.; Lt. Col. Thomas Geist, Dover AFB, Del.; Lt. Col. Jerome Perkel, Hurlburt Field, Fla.; Maj. Thomas Woerlein, USA retired, Kirtland AFB, N.M; Lt. Col. Francis Ryan, Little Rock AFB, Ark.; Lt. Col. Bob Brett, McChord AFB, Wash.; CMSgt. Sid Presley, Portland International Airport, Ore.; Lt. Col. Earl Dare, McGuire AFB, N.J.; MSgt. Peter Borraccini, Philadelphia, Pa.; Lt. Col. Julius Korson, Willow Grove, Pa.; MSgt. Raymond Smith, Wyoming, Pa.; Lt. Col. David Alexander, Norton AFB, Calif.; CMSgt. Alvie Boatright, Pope AFB, N.C.; Col. Ferris Hoover, Scott AFB, Ill.; PO3 Richard Smith, USN retired, Travis AFB, Calif.

Air Force Systems Command — MSgt. Lew Ross, Arnold AFB, Tenn.; WO1 Garland Carriker, Brooks AFB, Texas; Lt. Col. Melvin Baker, Edwards AFB, Calif.; Mrs. Rena Smith, Eglin AFB, Fla.; MSgt. Francis Dusseault, Hanscom AFB, Mass.; SFC Joseph St. Pierre, USA retired, Harlingen, Texas; Lt. Col. Walter Bailey, Los Angeles AFB, Calif.

Pacific Air Forces — SMSgt. William Hawkins, Elmendorf AFB, Alaska; Col. John Chasteen, Hickam AFB, Hawaii; CMSgt. Norman Mash, Yokota AB, Japan.

Air National Guard — Mrs. Anne Strong, Rickenbacker ANGB, Ohio.

CHAMPUS UPDATES

Restored eligibility — Late in 1991, Congress reestablished CHAMPUS eligibility until age 65 for persons under 65 who:

* Lost CHAMPUS eligibility when a disability (not end stage kidney disease) entitled them to Medicare Part A; and

* Are enrolled in Medicare Part B.

The new laws, which make CHAMPUS second-pay to Medicare for these eligible persons, began the restored eligibility on Oct. 1, 1991, for military retirees and their dependents. For all other CHAMPUS-eligible persons, the date of restored CHAMPUS eligibility is Dec. 5, 1991. The above eligibility limitations don't apply to the dependents of active-duty service members; they don't lose CHAMPUS benefits if they become Medicare-eligible.

What CHAMPUS pays persons with restored eligibility will depend on whether the care received is a benefit under both Medicare and CHAMPUS. If the care is covered by CHAMPUS, but is not also covered by Medicare (such as prescription drugs), CHAMPUS will cost-share the care as a routine claim.

If the care is also a benefit under Medicare, a claim will first have to be submitted for payment under Medicare Part A or B. When Medicare has paid, and when an individual's Medicare supplemental insurance policy (if the person has one) has paid, a CHAMPUS claim may be submitted. CHAMPUS payment will be determined using unique procedures required by the new laws. CHAMPUS claims processing contractors have been ready since March 18 to receive and process claims for people who have had their eligibility restored under the laws.

Under interim guidelines for handling CHAMPUS claims for these persons, the CHAMPUS claims processing contractor must verify the person's eligibility as well as determining the payment amount.

The following must be submitted to the CHAMPUS claims processor along with the CHAMPUS claim:

* A copy of the Medicare explanation of benefits;

* A copy of the Medicare supplemental insurance policy's EOB (if the patient has such a policy);

* A copy of the award letter which confers eligibility for Medicare Part A on the patient, based on disability;

* A copy of the patient's Medicare card.

The Medicare EOB will show how much Medicare paid, and will also indicate the patient's Medicare deductible, co-payment, and the remaining charges the patient must pay under Medicare.

CHAMPUS will then process the claim to determine the patient's deductible, cost-share and remaining charges under CHAMPUS. The payment CHAMPUS makes on the claim will be the amount by which the Medicare charges owed by the patient are greater than the cost he or she must pay under CHAMPUS.

The new eligibility provisions are being put into effect as CHAMPUS contractors modify their claims processing systems to accept claims from persons with restored eligibility.

Under the interim guidelines, CHAMPUS claims processors will furnish eligibility information to DEERS (the Defense Enrollment Eligibility Reporting System) when the required documentation listed earlier is received along with claims. When final rules are published on procedures for determining eligibility and filing claims, the new rules will be publicized by CHAMPUS headquarters.

For persons with restored eligibility, CHAMPUS will cost-share covered care received at any time since the eligibility began anew, in October or December of 1991. For more information, contact the health benefits advisor at the nearest military installation.

Number change - The toll-free telephone number for states in CHAMPUS' South Central claims processing region has changed. The toll-free number which people who live in Arkansas, Kansas, Louisiana, Missouri, Oklahoma and Texas can use to call the CHAMPUS contractor is: 1-800-388-6767.

DRG cost share is revised- The CHAMPUS diagnosis-related group daily cost-share for most civilian hospital admissions has changed.

The daily rate for most hospital admissions is $241 (the $317 figure that was published in the Federal Register is incorrect.) CHAMPUS-eligible people who are not the dependents of active-duty service members will pay either the fixed daily $241 rate, or 25 percent of the hospital's billed charges, whichever is less.

For more information about DRG payments, contact the health benefits advisor at the nearest uniformed services medical facility.

DIRECTORY ASSISTANCE

How to...

Inquire About The Retiree Activities Program (OPR: Air Force Retiree Activities Branch)

Contact AFMPC/DPMARA, Randolph AFB, TX 78150-6001, 1-800-531-7502; in Texas 1-800-292-5222. Call 8-11 a.m., 1-4 p.m, Tuesday through Thursday. The Air Force Retiree Activities Branch manages the retiree activities program and the Air Force Retiree Council; acts as advisor to the Air Force retirement communities; processes foreign government employment applications; publishes retiree directives and USAF News for Retired Personnel (Afterburner).

Inquire About Retired Pay And Annuities (OPR: Defense Finance and Accounting Service-Denver Center)

Retirees contact DFAS-DE/RT, Denver, CO 80279-5000 on all retired pay matters.

Survivor annuitants contact DFAS-DE/RB, Denver CO 80279-5000 for RSFPP/SBP/RCSBP annuity account matters and address changes.

Call (303) 676-7051 or 1-800-525-0104. Give your sponsor's full name and Social Security number in all inquiries.

Get Help Locating An Air Force Retiree Or Active Member (OPR: Air Force Military Personnel Center)

The Air Force may not release home or overseas duty addresses, but will forward a personal letter. Seal your letter in a stamped envelope, enter your return address (including your retired grade and Social Security number) and send your letter and addressee's name, grade and Social Security number or service number in another envelope to AFMPC/RMIQL, Randolph AFB, TX 78150-6001. (If addressee's SSN/SN is not available, the locator needs his or her most recent Air Force base assignments/dates, etc., to help research an address.) Only one request per envelope. For a reply about the status of your letter, provide a stamped self-addressed envelope.

Air Force locator service — free to retirees and their immediate families — is limited to one address per request. Air Force does not provide reunion locator service.

Inquire About ID Cards And Update DEERS (OPR: Air Force Military Personnel Center)

Contact an Air Force base CBPO or any military personnel office. Sponsor should be aware of expiration dates of dependent ID cards and is responsible for updating DEERS if family status changes affect military benefits/privileges.

Inquire About Air Force Retirement Communities (OPR: Air Force Retiree Activities Branch)

Air Force Enlisted Widows Home Foundations, 571 Mooney Rd., Fort Walton Beach, FL 32547-1859, or call (904) 863-4113 or 862-9627.

Air Force Village Foundation, 5100 John D. Ryan Blvd., San Antonio, TX 78245-3502, or call (512) 677-8988 or 1-800-762-1122.

The General and Mrs. Curtis E. LeMay Foundation, 17050 Arnold Dr., Riverside, CA 92508, helps indigent widows of Air Force officers. The phone number is (714) 697-2099/2000; or toll free, 1-800-554-5510.

Army Residence Community, 7400 Crestway, San Antonio, TX 78239, (512) 646-5300. Retired Air Force officers are eligible for membership.

Report The Death Of A Retiree Or Contact A Casualty Assistance Representative (CAR) (OPR: Air Force Military Personnel Center)

Next of kin should contact the nearest Air Force base personal affairs unit. If the CAR is unavailable, write or call AFMPC/DPMCAA, Randolph AFB, TX 78150-6001, 1-800-433-0048 or (512) 652-5513; in Texas 1-800-292-5642.

Inquire About The U.S. Soldiers' and Airmen's Home

Contact USSAH Admissions Dept., Washington, D.C. 20317-0001, 1-800-422-9988 or (202) 722-3337.

Inquire About VA Insurance, VA Benefits, Or VA Disability Compensation (OPR: Department of Veterans Affairs)

For a NSLI account, contact VA Insurance, P.O. Box 8079, 5000 Wissahickon St., Philadelphia, PA 19101, 1-800-669-8477.

For a VGLI account, contact OSGLI, 213 Washington St., Newark, NJ 07102, (201) 802-7676.

For VA benefits or disability compensation and claims, contact the nearest VA regional office (consult phone book or ask for operator assistance). Veterans service organizations (DAV, VFW, American Legion, etc.) and state veterans commissions also provide assistance.

Obtain Assistance From The Air Force Aid Society

For academic grants and loans, contact the closest Air Force base AFAS section or write AFAS, Education Department, 1745 Jefferson Davis Highway, Suite 202, Arlington, VA 22202, (703) 692-9313.

For emergency assistance, contact an Air Force base AFAS section, any Army, Navy or Marine Corps installation or a chapter of the American Red Cross.

(Continued on page 11)

Editor's Notebook ...

Since taking over as editor of the Afterburner, I've discovered three important things: The Afterburner reaches a large audience throughout the world; there are too few pages to print everything the readers want; and many people look to the Afterburner editor for more knowledge on more subjects than it's possible for one person — at least, this person — to have.

On the first matter, this is evident from the number of letters arriving on a daily basis. Unfortunately there is too little time to answer most of them but we do appreciate your comments and suggestions. Believe me, we do consider all suggestions and if a suggestion will improve the publication, we'll do it. But there are some things we can't do and most of them cost money: i.e., send the Afterburner first class mail so it can be forwarded; adding more pages, etc.

That brings us to the third thing: the Afterburner as the expert, the authority on various issues. After each issue, we're inundated by letters requesting more information on certain items printed in that issue. Please remember that the Afterburner is a medium for disseminating information, not the policy maker and certainly not the expert. True, we have the experts on SBP in this office and because of our own readings, we do have certain other information. We're glad to pass that along either by phone or by a short note. However, those people wanting more information on CHAMPUS, Medicare and Social Security, to name just a few subjects, would be much better served by writing the agencies concerned.

In the future, we'll try to include the address of the agency concerned from which to request additional information on certain subjects.

Afterburners returned — Because of the importance of the subject matter — the Survivor Benefit Plan open season — we did something differently with the last Afterburner: the Air Force Military Personnel Center paid the extra postage to have copies forwarded to retirees and gray area reservists. (Since the issue contained only SBP open enrollment information affecting retirees, that issue was not sent to annuitants and non-annuitants.)

It paid dividends as the U.S. Postal Service forwarded hundreds of copies and, as far as we know, they got to the intended audience. However, a major concern is that some Afterburners were returned because forwarding orders had expired. It also means that a number of people authorized to receive it have not submitted change of address forms.

You can help by making a copy of the change of address form shown below and, as soon as you have a new address, complete the form and submit it to the proper agency as shown on the form. Better yet, make two copies and give one to your friend who complains he or she hasn't received an Afterburner in a long time — probably since making that last move and forgetting to notify the right agency of the new address. We've tried to change the form to make it easier to determine where to send it: match the number of your category (retiree, annuitant, etc) with the address category.

PRIVACY ACT OF 1974–Auth. Sect. 3012, Title 10 US Code. Purpose: To change correspondence (home) address. Failure to submit an address change can result in delay of tax information and other official mail including *Afterburner*. Do not use this form for changing your retired pay address unless your pay check is mailed to your home address. It is the responsibility of every retiree to promptly notify the Air Force of an address change.

NOTICE OF ADDRESS CHANGE (Check appropriate box)

1. ☐ Retiree receiving retired pay 2. ☐ Retired reservist not yet 60 3. ☐ Annuitant 4. ☐ Non-Annuitant

Name of Retiree	**Retired Grade**	**SSN**
Name of Widow(er)	**Deceased Sponsor's SSN**	
Home Address	**(If foreign, spell out name of country in capital letters)**	
Signature		**Date**

If you are: — Mail this form to:

1. Retiree receiving retired pay .... DFAS-DE/RMDR, Denver, CO 80279-5000
2. Retired reservist not yet 60 .... ARPC/DSFS, Denver, CO 80280-5000
3. Annuitant .... DFAS-DE/RB, Denver, CO 80279-5000
4. Non-Annuitant .... AFMPC/DPMARA, Randolph AFB, TX 78150-6001

*Please write the words **Address Change** on envelope*

FLORIDA VA MEDICAL FACILITIES

The Department of Veterans Affairs has announced plans for the construction of new medical facilities to serve an expanding veterans population in East Central Florida. Sites in Orange County near Orlando and in Brevard County near Melbourne were chosen for future construction of a VA hospital, two nursing homes and an outpatient clinic.

The decision would place a new 470-bed medical center and 120-bed nursing home on a 78-acre site some 11 miles southeast of Orlando. Another 120-bed nursing home and full service outpatient clinic would be built just north of Melbourne near I-95, exit 72.

VA plans to seek design funding for the total project in its 1994 budget request. With congressional approval, construction could begin at the Brevard site as early as 1994. Funding to begin to build the Orange County facilities would be sought in VA's fiscal year 1995 request, with completion targeted for 1999.

No smoking standards — Accreditation standards soon to take effect will reinforce general prohibitions on visitor, patient and staff smoking inside hospitals and clinics of the Department of Veterans Affairs.

The standards, which went into effect Jan. 1, were published by the Joint Commission on Accreditation of Healthcare Organizations, the national voluntary organization for promoting broad institutional standards of care.

VA requires all of its medical centers to maintain accreditation by the Joint Commission, and all 172 VA medical centers are fully accredited.

While the guidelines give facilities up to 24 months from the date of their next accreditation survey to implement new smoking policies, VA Secretary Edward Derwinski called on veterans and VA staff members to work toward a complete smoke-free environment as quickly as possible.

The VA goal is not simply to move smokers from the halls to the front steps or an outdoor shelter. The director said the VA is making a new commitment to education programs that will help people quit smoking.

The department is broadening its efforts to make programs available to all patients who wish to enroll. It is asking physicians to actively counsel all patients who smoke on the health benefits of stopping.

The goal for a smoke-free workplace also extends to VA benefits and administrative offices around the country.

Policy dividends — More than $1 billion in dividends will be paid in 1992 to veterans holding active policies, the U.S. Department of Veterans Affairs has announced.

VA Secretary Edward Derwinski said the dividends are made possible because veterans are living longer than predicted, and the insurance trust funds are earning high yields from investment in long-term government securities.

Affected are some 2.6 million veterans of World Wars I and II, and the Korean Conflict whose accounts will be automatically credited on the anniversary of their policies. Policyholders may choose to receive a dividend check or select one of five alternate payment options. No application from individual policyholders is necessary. Only those policies that have been kept in force will receive an annual dividend distribution.

The largest group to receive a payment will be the 2.2 million War War II veterans holding National Service Life Insurance "V" policies who will receive an average payment of $389. Total payments are expected to reach $861.2 million. Dividends totaling $9.2 million will be paid to 32,986 World War I veterans with U.S. Government Life Insurance "K" policies for an average payment of $279. Some 270,589 Korean Conflict veterans who have maintained Veterans Special Life Insurance designated "RS" and "W" can expect to receive dividends averaging $394 for a total of $106.7 million.

Veterans who hold Veterans Reopened Insurance policies will share a $32 million dividend. Average payments to "J" policyholders are $290; for "JR," $521; and "JS," $531. Although VA also administers a special life insurance program for disabled veterans and a program offering mortgage life insurance coverage, neither pays dividends.

Veterans who have questions about their policy may call the VA Insurance toll-free number: 1-800-669-8477.

VA updates benefits handook — One of the federal government's all-time best-selling publications, "Federal Benefits for Veterans and Dependents," has been updated for 1992 and is now available from the U.S. Government Printing Office.

Published by the Department of Veterans Affairs, the 96-page handbook describes federal benefits for veterans and dependents such as medical care, education, disability compensation, pension, life insurance, home loan guaranty, vocational rehabilitation and burial assistance.

The handbook, which sells for $3.70, also includes special sections on veterans benefits administered by other federal agencies, including the Departments of Defense and Labor.

The handbook is available postpaid from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-9325, stock number ISBN 0-16-036128-1. To order with VISA or Mastercard, phone (202) 783-3238.

DIRECTORY ASSISTANCE

How to...
(Continued from page 8)

Get Information From Active Duty Records Or Replace Decorations/Awards (OPR: National Personnel Records Center)

Mail the following information to NPRC/NCPMF-C, 9700 Page Blvd., St. Louis, MO 63132-5000: a signed request with your full name, retired grade, Social Security number, and an explanation of your requirement(s). Standard Form 180, Request Pertaining to Military Records, may also be used. NPRC normally replies in four to six weeks. A small fee may be charged for copying documents.

Dependents' medical records are forwarded to a NPRC depository at 111 Winnebago St., St. Louis, MO 63118-4126 two years after the sponsor retires.

Get Information From ANG/AFRES Records (OPR: Air Reserve Personnel Center)

Reserve retirees not yet eligible for retired pay should contact ARPC/DSMRC, Denver, CO 80280-5000, 1-800-525-0102, Ext. 225/226 or (303) 676-6506. (Call Ext. 228 for information about the Reserve Component Survivor Benefit Plan.) When member becomes eligible for retired pay at age 60, ARPC forwards records to the National Personnel Records Center in St. Louis.

Request Approval For Foreign Government Employment (Authority: AFR 211-46, OPR: Air Force Retiree Activities Branch)

Contact AFMPC/DPMARA, Randolph AFB TX 78150-6001, 1-800-531-7502 for instructions. In Texas call 1-800-292-5222. Call 8 to 11 a.m. or 1 to 4 p.m. Tuesday through Thursday.

Inquire About VA Disability Compensation Applied to Retired Pay (OPR: Defense Finance and Accounting Denver Center)

Upon award of VA disability compensation, the amount is automatically applied to reduce taxable retired pay. For all retired pay matters, see Inquire About Retired Pay And Annuities, page 8.

Contact the United States Air Force Historical Research Center

USAFHRC/QE, Maxwell AFB, AL 36112-6678, (205) 953-5723, answers inquiries about unit histories, awards and heraldry. To contribute written or photographic documentation, flags, patches and other unit memorabilia depicting the history of air power, first send a description to USAFHRC/AD.

AIR FORCE ASSISTANCE FUND DRIVE

The 1992 Air Force Assistance Fund campaign is underway. AFAF contributions support the Air Force Aid Society's programs to provide education and emergency financial assistance to active duty and retired Air Force members.

The AFAF also supports the Air Force Enlisted Widows Home; Air Force Village I and II; and the General and Mrs. Curtis E. LeMay Foundation.

You can contribute by sending your check with the completed form below to 1992 AFAF Campaign, HQ AFMPC/DPMASC, Randolph AFB TX 78150-6001. Contributions may also be made by payroll deduction allotments by completing and signing Part B of the form below.

1992 AIR FORCE ASSISTANCE FUND

Mail to: Air Force Assistance Fund
HQ AFMPC/DPMASC
Randolph AFB, TX 78150-6001

NAME (*Last, First, Middle Initial*)	GRADE	SOCIAL SECURITY NUMBER

IF CASH COMPLETE SECTION A
IF PDP COMPLETE SECTION B

A. CASH

Air Force Village Indigent Widows Fund (AFV)	$
Air Force Aid Society (AFAS)	$
Air Force Enlisted Widows Home (AFEWH)	$
The General and Mrs. Curtis E. LeMay Foundation (LeMAY)	$
TOTAL GIFT	**$**

B. PDP

(Remember - minimum allotment to any affiliate is $1.00 per month.)

Allotments effective June 1992

		MONTHLY ALLOTMENT	NUMBER MONTHS	TOTAL
AFV	Air Force Village Indigent Widows Fund T595130	$	x 12 =	$
AFAS	Air Force Aid Society T598092	$	x 12 =	$
AFEWH	Air Force Enlisted Widows Home T560696	$	x 12 =	$
LEMAY	The General and Mrs Curtis E. LeMay Foundation 1000270	$	x 12 =	$
			TOTAL PDP	$

PLEASE READ. I hereby authorize deductions from my monthly retired pay beginnning June 1992 for a period of twelve (12) months in the amount shown to the affiliate(s) designated. This allotment will remain in effect for twelve (12) months unless I request in writing to DFAS-Denver Center/RT, Denver, CO 80279-5000 that it be stopped.

SIGNATURE

FOR AFO USE ONLY

CLASS "F" ALLOTMENT FOR CONTRIBUTION TO AFAF CAMPAIGN EFFECTIVE DATE 920601

PREPARED BY

TWO AAFES PROGRAMS CATCH ON

Two Army and Air Force Exchange Service programs are catching on among many retirees. One saves time and the other, money.

If you have exchange shopping privileges, you can use the Exchange Mail Order Catalog. Two large editions are produced annually — the Spring/Summer catalog in January and the Fall/Winter each July. The catalogs, which currently cost $3 each, may be purchased at any military exchange and offer the widest assortment of merchandise from around the world.

Ordering merchandise from these catalogs is easy as a result of a convenient, toll-free telephone number. Central processing representatives working the telephones receive more than 65 percent of the catalog orders placed in the United States. Customers may also place orders by using the free in-store electronic ordering program. AAFES service desk employees have all the details.

Customers may make catalog purchases by Mastercard, Visa, or Discover credit cards. When ordering by phone, customers should have the sponsor's Social Security number, mailing address, and credit card number with expiration date when placing the call.

Some helpful toll free numbers for credit card orders in the United States and Puerto Rico:

Phone: 1-800-527-2345
FAX: 1-800-446-0163
Hearing Impaired: 1-800-423-2011

Commercial numbers are: 1-214-312-6472; and the FAX number is 1-214-312-2000.

If you've been one to think that you could beat the prices at your local Army and Air Force Exchange by shopping at one of the large department stores, check out the AAFES "Best Price" program.

The competitive pricing program, started about a year ago, is designed to match local department stores' advertised prices for temporary sales and everyday low prices.

Customers wanting to take advantage of the special prices need only take a copy of the local competitor's advertisement to their installation's main exchange. The store will, in turn, discount the item, not only to the customer who brought in the ad, but also to all other shoppers. Some restrictions apply.

Unlike other retailers with competitive pricing programs, AAFES will match the competitor's advertised price for the same sale dates of the identical item for all inventory on hand at all AAFES facilities on the installation.

The best price policy applies only to merchandise available in main exchanges and excludes advertisements for gimmick promotions, one-of-a-kind items, double and triple coupons, clearance items, flat percentage-off items, going-out-of business sales and grand opening specials.

*U.S. Government Printing Office: 1992 — 661-078/60000

HQ AFMPC/DPMARA
RANDOLPH AIR FORCE BASE, TX 78150-6001

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

THIRD CLASS BULK
POSTAGE & FEES PAID
CLAYSBURG, PA
PERMIT NO. 4

COL USAF RET
[redacted]

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE ACCOUNTING AND FINANCE CENTER
DENVER, CO 80279

28 SEP 1990

OFFICE OF THE COMMANDER

To our valued customer--retiree or annuitant:

As Commander, one of my major concerns is to ensure the Air Force is providing its members with the best pay service possible. This newsletter provides an excellent forum for us to advise you of what's happening in the retired and annuitant pay areas and to provide suggestions on how, sometimes with your help, we can improve our service to you.

I'm excited about the Retired Pay Voice Response System we are implementing in conjunction with our toll-free telephone lines. It's designed to give the latest retired and annuitant pay news along with instructional information--more details inside. Also, we are acquiring a new state-of-the-art optical imaging system to allow us to process your correspondence faster.

Last year we redesigned the retiree pay account statement; it's easier to read and provides more information. This year we've done the same for our annuitants. Expect a revised and improved annuitant account statement in December 1990.

The Department of Defense (DOD) is consolidating and standardizing functions to produce economies in the current austere budget environment. One initiative is to bring all the services' accounting and finance operations under the auspices of a DOD agency. In January 1991, each of the services' accounting and finance centers will become a Defense Financial Services Center. As a result, the Air Force Accounting and Finance Center (AFAFC) will no longer exist. But, rest assured; the change is in name only! We will continue to serve Air Force retirees from Denver, and our commitment to excellence remains unchanged.

Finally, a word about this year's cost-of-living adjustment (COLA). The COLA is determined by the Consumer Price Index (CPI). As of 31 August 1990, the CPI has increased 4.6 percent; however, the final COLA is not determined until 30 September 1990. The COLA is then applied to your December entitlement for payment the first business day in January. You should be aware the amount and timing of the COLA is a subject of discussion in the budget reconciliation process on Capitol Hill. At this time the impact, if any, on the COLA for this year cannot be determined. Be assured the Air Force senior leadership continues the effort to ensure retirees and annuitants receive the full COLA.

As always, your concerns and suggestions for improvement are important to us, so please let us know.

1 Atch
Newsletter

CHARLES D. METCALF, Major General, USAF
Commander

Serving With Honor....Honored With Trust

GENERAL INFORMATION

RETIREE/ANNUITANT CORRESPONDENCE:
The Air Force Accounting and Finance Center (AFAFC) is a customer service organization. In order for us to expedite your requests, please include your NAME and SOCIAL SECURITY NUMBER (SSN) on all correspondence. For annuitants, please include both your SSN and the retiree's SSN. Address all correspondence pertaining to retired pay to AFAFC/RPT, Denver CO 80279-5000, and annuity pay to AFAFC/RPB, Denver CO 80279-5000. The proper address and your name and SSN will help us to ensure accurate and timely processing of your requests.

RETURNED MAIL:
We need your help! A large number of our retirees are mobile and that's great, but every time you move we need your address. We crossfeed your new addresses with AFMPC as well, so if you want to continue to receive our Newsletter, the Afterburner, and other special mailings we send out, we need to have your correct and current address. Every time we have a special mailing, we get back some 20-25,000 pieces of mail as undeliverable, and that costs us all money ($5-6000 a pop). We are instituting a special procedure; when we receive two consecutive pieces of mail, account statements, W-2s, special mailings, newsletters, etc., back from the Postal Service as undeliverable, we will not send anymore mail until we hear from you. Checks will continue to go out and, of course, direct deposit to your bank, credit union, etc., will continue uninterrupted. It's just the mail that will stop until we hear from you, so please keep us advised of your current correspondence mailing address.

BOND ADDRESSES:
For those of you who participate in the Savings Bond program, when you make a change of home address, we also need to know if that change applies to where your bonds should be mailed.

BASE-LEVEL ASSISTANCE:
Assistance can also be provided by the retiree activity office located on each Air Force base. That office, staffed mainly by volunteer retired military members, serves as a contact point for retirees and annuitants and represents you in obtaining or providing information to AFAFC. Assistance is also provided by personnel in the accounting and finance offices at all of our Air Force bases. Each of these offices has direct contact with personnel here in RP. Normal actions such as a change of address can be accomplished while you wait.

CASUALTY ASSISTANCE REPRESENTATIVES (CARs):
Did you know there are CARs located at each base who will assist the survivors of retirees in completing necessary documents for payment of arrears of pay and Survivor Benefit Plan (SBP) annuities? Contacting the nearest CAR for assistance will result in faster and more accurate processing of claims.

TELEPHONE NUMBER CHANGES AT AFAFC/RP:
Effective 13 August 1990, the telephone prefix "370" is no longer valid on our commercial lines. The new prefix is "676." Our toll-free number did not change, nor did our AUTOVON number; however, the Automatic Voice Network (AUTOVON) is now called the Defense Switching Network (DSN). Here's a recap of our telephone numbers:

Toll-free number: 1-800-525-0104 (can be used in all 50 states)

Commercial and metro-Denver number: (303) 676-7051

DSN number: 926-XXXX

You can reach us by calling our toll-free number during our normal customer service hours from 0630 until 1630 (Mountain Time), Monday through Friday, except holidays.

PROBLEM RESOLUTION:
Our policy is to resolve problems at the lowest level possible. If you do experience difficulty, please call our toll-free number and ask to have the section chief call you back. If the difficulty continues, request the appropriate branch or division chief call you. Finally, the Director and Deputy Director are available in the event all other avenues have been exhausted.

VOICE RESPONSE SYSTEM AND TELEPHONE INQUIRY INFORMATION:
We've experienced some delays installing the Retired Pay Voice Response System on the toll-free telephone lines, but we hope to have it operational soon. Some features include the latest news in the retired and annuity pay arena, instructional information for various aspects of retired pay, and the ability to leave a message at any time. Upon implementation, the Voice Response System will be operational 24 hours a day, 7 days a week; during normal duty hours, you can also speak to an account representative for specific information about your account. We hope you will like our enhanced capability!

STATE TAX WITHHOLDING (RETIREES ONLY):
As of 1 February 1989, 36 states, the District of Columbia, and Puerto Rico have reached an agreement with the Department of Defense to withhold state income tax from military retired pay. The withholding is strictly voluntary at this time. You can have state income tax withheld for up to two states during a calendar year. (This means that a retiree who moves to a new state during a calendar year can have state tax withheld for both states, one at a time.) If you would like to have state tax withheld from your retired pay, please send us a signed letter which includes your full name, social security number, current address, amount to be withheld (must be even dollar amounts, the minimum being $10), and the state designated to receive withholding. The following states are participating in this program:

ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	DELAWARE
GEORGIA	IDAHO	INDIANA	IOWA	KANSAS	KENTUCKY
LOUISIANA	MAINE	MARYLAND	MASSACHUSETTS	MINNESOTA	MISSISSIPPI
MISSOURI	MONTANA	NEBRASKA	NEW JERSEY	NEW MEXICO	NEW YORK
N. CAROLINA	N. DAKOTA	OHIO	OKLAHOMA	OREGON	RHODE ISLAND
S. CAROLINA	UTAH	VERMONT	VIRGINIA	W. VIRGINIA	WISCONSIN

UPDATE ON DAVIS v. MICHIGAN:
In 1989, the U.S. Supreme Court invalidated certain provisions of Michigan's income tax laws that exempted Michigan state employees' retired pay from that state's income tax, while subjecting the annuities of retired Federal employees to the same tax (Davis v. Michigan, 109 S. Ct. 1500 (1989)). The Court concluded that since Michigan does not tax the retired pay of its own employees, it could not tax the retired pay of Federal employees. The Davis decision has served as the basis for some military retirees to claim refunds of state income taxes paid to certain states other than Michigan that have similar laws regarding the taxation of retired employees.

In addition to the State of Michigan, there are 26 other states apparently affected by the Davis decision: Alabama, Arizona, Arkansas, Colorado, Georgia, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New Mexico, New York, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, West Virginia, and Wisconsin. Most of these states have amended their income tax laws to exempt a part, or all, of Federal retired pay, including military retired pay, from state income taxes, or amended their laws to require taxation of the retired pay of state employees.

For tax years prior to 1990, an individual who was taxed on Federal retired pay may be eligible for a refund of state income taxes. This issue has yet to be resolved in most of the affected states because the rulings of lower courts ordering a refund of state income taxes are being appealed by the affected states. To obtain information on the current status of eligibility for a retroactive refund of state income taxes in a particular jurisdiction, retirees should contact the state tax office where income tax returns for that state are filed. Generally, there is a 3- or 4-year statute of limitations for filing a claim for refund of state income taxes. Therefore, retired individuals who may be eligible for a refund of state income taxes should file an amended return with the applicable taxing authority as soon as possible in order to preserve their rights to the refund. It may be helpful to include a letter or statement with the amended return indicating that the basis for filing the return is the Davis v. Michigan case.

ELECTION AND VERIFICATION OF DESIGNATED BENEFICIARY:
As you are aware, all retired members must designate a beneficiary for their arrears payments in case of death. Retired members normally make this designation at time of retirement. However, should your designated beneficiary predecease you or you divorce, you will want to change your designation. You may do this by either writing us with the following information: your name, SSN, birthdate; spouse name, SSN, birthdate; date of marriage; type of designation--either: (1) order of precedence, or (2) designation by name and

percentage amount for each designated beneficiary; or complete AF Form 114, Arrears of Retired Pay Designation, and send to AFAFC/RPT, Denver CO 80279-5000. AF Forms 114 can be obtained from us or the nearest Air Force consolidated base personnel office (CBPO) personal affairs unit.

MANDATORY DIRECT DEPOSIT:

On 1 September 1989, the Air Force implemented a policy requiring mandatory participation in the Direct Deposit Program for all new retirees. Annuitants and those members retiring prior to 1 September 1989 were excluded from mandatory participation. However, all retirees and annuitants should consider participating in direct deposit as it benefits both the member and the Air Force. It's the smart way to do business! Benefits include increased security by eliminating lost or stolen checks, having the money available the morning of the payment date, and alleviating the time and expense of making special trips to deposit or cash checks.

Benefits to the Air Force include reduced operating costs; implementation of a highly dependable, efficient payment and tracking system; and improved customer service in responding to pay inquiries.

To participate in the Direct Deposit Program, please complete a Standard Form 1199A, Direct Deposit Sign-Up Form, which is available from the financial institution of your choice. A representative of the financial institution will assist you in completing the form, and they will forward it to us.

SURVIVOR BENEFIT PLAN (SBP) OPEN SEASON:

The Military Survivor Benefits Improvement Act of 1989 (Public Law 101-189) contained proposals for an open enrollment period effective 1 October 1991 through 30 September 1992, and an opportunity to participate in a Supplemental Survivor Benefit Plan (SSBP). There is a possibility the start date of the open season and SSBP may be delayed an additional 6 months. You'll hear from the Air Force Military Personnel Center (AFMPC) in ample time regarding your options once final decisions regarding this law are made.

IRREVOCABILITY OF YOUR SBP ELECTION:

Once elected, SBP is irrevocable; however, if you're a participant in SBP with spouse or spouse and child coverage and your spouse is deceased or you divorce, send us a copy of the death certificate or divorce decree as soon as possible so we can suspend the spouse coverage and eliminate overdeductions from your retired pay entitlement.

DIVORCE, DEATH OF SPOUSE - REMARRIAGE:

If you are a participant in SBP and your spouse is deceased or you have divorced and you subsequently remarry, please advise us immediately of the remarriage. The cost for coverage of the new spouse begins the first of the month after the first anniversary of the remarriage. Additionally, upon notification of remarriage, you will be furnished your options to (1) resume coverage at original election, (2) increase coverage (base amount) up to and including the maximum coverage, or (3) elect not to have the spouse portion of coverage resumed. If you elect to increase coverage, you must pay the difference between the cost of the original level of coverage and the increased level of the premiums. Interest will be assessed on the difference from the date of the original election. These costs must be paid before the new spouse becomes an eligible beneficiary or the election will become void. Prompt notification of remarriage can help preclude a debt on your retired pay account.

SBP--FORMER SPOUSE:

If you have agreed to continue SBP for your former spouse, you must request this in writing within 1 year of the date of divorce. Please write to AFAFC/RPT, Denver CO 80279-5000, and request the appropriate forms you must complete and return to ensure the coverage is implemented. You may also request the forms by calling toll-free 1-800-525-0104 or by contacting the nearest CBPO personal affairs unit.

If a court requires you to provide SBP for a former spouse and you fail to do so, the former spouse may request a "deemed" former spouse election within 1 year of the date of the court order or filing by writing to AFAFC/RPT, Denver CO 80279-5000. Any request for the coverage after 1 year of the court order bars establishment of the former spouse coverage. It is to the retiree's benefit to make the former spouse SBP election rather than having the former spouse make a deemed election, as the deemed election can revert back to the date of divorce and create a SBP debt to the retiree for that former spouse SBP coverage.

Many retirees are under the impression that if the court orders SBP be maintained for the former spouse, the retiree does not need to change the election; the former spouse is automatically covered as the beneficiary. This is <u>not</u> the case! SBP spouse coverage must be changed to former spouse coverage if it is your intent or if the court has ordered you to do so. The change must be made within 1 year of the date of divorce or the action can be barred.

SBP AND DEPARTMENT OF VETERANS AFFAIRS (VA) COMPENSATION:

When a retiree's VA compensation exceeds his gross retired pay, a total waiver of retired pay occurs. If the retiree has elected SBP, the premium must continue to be paid. Since no retired pay exists to pay these costs, a monthly billing notice is mailed to the member so the SBP premium can be paid by check. Arrangements can also be made with VA to have them submit the premium each month by deducting the premium from the VA compensation thereby relieving the retiree from providing monthly payments directly to AFAFC.

DUAL COMPENSATION AND PAY CAP:

If you're considering or already working for the Federal government as a civilian, the following will be helpful in understanding how your military retired pay entitlement may be affected due to receipt of both military retired pay and civilian pay. The following two restrictions, found in United States Code, title 5, section 5532, apply to military retired pay during a period of Federal civilian employment.

a. The first restriction is a dual compensation reduction from retired pay which applies to any retired Regular commissioned or warrant officer. The officer will receive the full salary of any Federal civilian office held; however, during that period, retired pay is reduced under an established formula. Those of you who entered active duty prior to 1 August 1986 are entitled to the first $671.70 of monthly retired pay plus one-half of the remainder. For a very few of you who entered on or after 1 August 1986, the rate is slightly less. These rates increase when a cost-of-living adjustment (COLA) is applied to military retired pay.

b. The second restriction is a pay cap limitation placed on the combined total entitlement for retired pay and Federal civilian basic salary. This restriction applies to any officer or enlisted member of a Regular or Reserve component who retired after 11 January 1979. Retired pay is reduced by the amount (if any) that the combined pay (after applying the above dual compensation reduction for Regular officers) exceeds the rate of basic pay for Level V of the Executive Schedule. If employment is on a full-time basis, the annual combined pay that exceeds the annual limitation is prorated to provide equal monthly reduction amounts from retired pay. The current (1 January 1990) annual rate for the pay cap is $78,200, but may increase to $97,800 effective 1 January 1991.

Federal employment must be reported to AFAFC/RP. While normally this is accomplished by the Federal agency, it is also the retiree's responsibility to make sure it's done. Although Federal agencies are required to submit the documentation (Standard Form 50, Notification of Personnel Action, or a comparable document), they do not always send it or it is delayed enroute. Lack of notification may result in a large overpayment of retired pay. When the debt (overpayment) is collected, it may also be subjected to interest charges. To ensure timely adjustment to your retired pay, immediately report Federal employment to RP by telephone, letter, or on DD Form 1357, Statement of Employment (which all retired Regular officers are required to complete for 3 years after retirement). Notify AFAFC/RPT, Denver CO 80279-5000, or call the toll-free number (1-800-525-0104). If you think you might be affected under either or both of these provisions, please let us know.

SBP PAYMENTS TO SURVIVORS AGE 62 AND OLDER:
An often misunderstood aspect of SBP is the benefit computation for surviving spouses age 62 and older. Congressional intent in establishing the SBP was to ensure survivors a monthly income equal to at least 55 percent of the deceased member's retired pay. The 55 percent included the survivor's SBP payment and social security entitlement resulting from the deceased member's military service.

There are two ways to compute SBP payments to surviving spouses age 62 and older:

a. If the member became retirement eligible after 1 October 1985, the survivor is paid 35 percent of the base amount (retired pay covered by SBP). The base amount increases by COLAs applied to retired pay.

b. If the member was retired or retirement eligible before 1 October 1985, the annuity is computed under the method described above and under the social security offset system described below. The survivor is paid under the system that provides the greater benefit. Under the social security offset, the annuity is 55 percent of the base amount less the social security benefit the spouse would be entitled to based solely on the member's military service performed after 1956.

The annuity base amount is shown on the retired pay statements retirees receive each time their retired pay changes. A survivor over age 62 will receive at least 35 percent of the annuity base amount and also will be entitled to a social security widow or widower's benefit if the deceased member was entitled to social security benefits. If the deceased member did not qualify for social security benefits, the survivor's SBP payment is not reduced at age 62. Annuities resulting from a member's participation in the Reserve Component Survivor Benefit Plan (RCSBP) are slightly less than those described above. This is because there is a charge for the coverage provided in the years before the member became eligible for retired pay.

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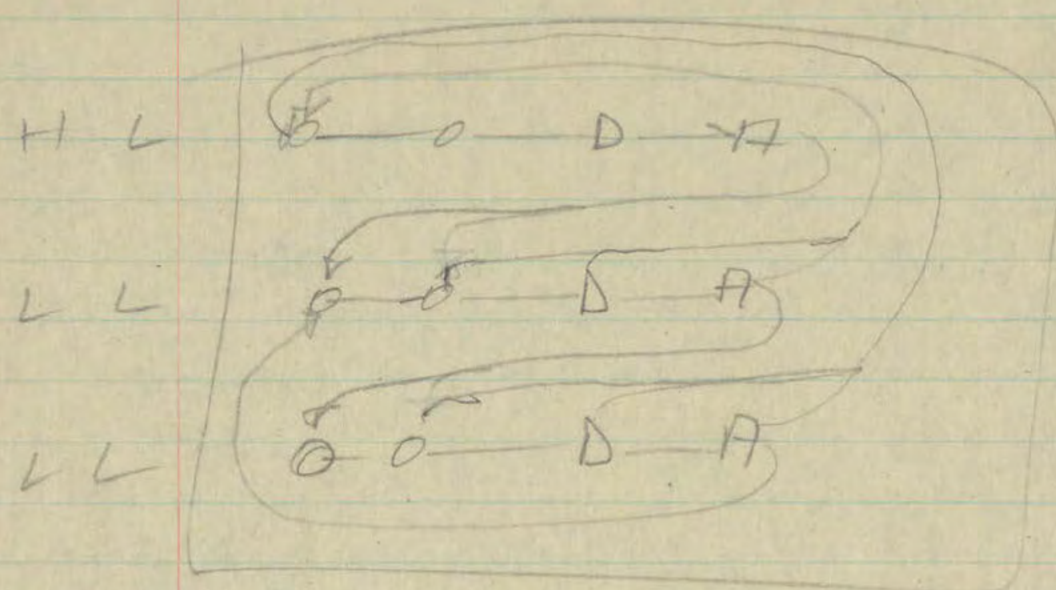
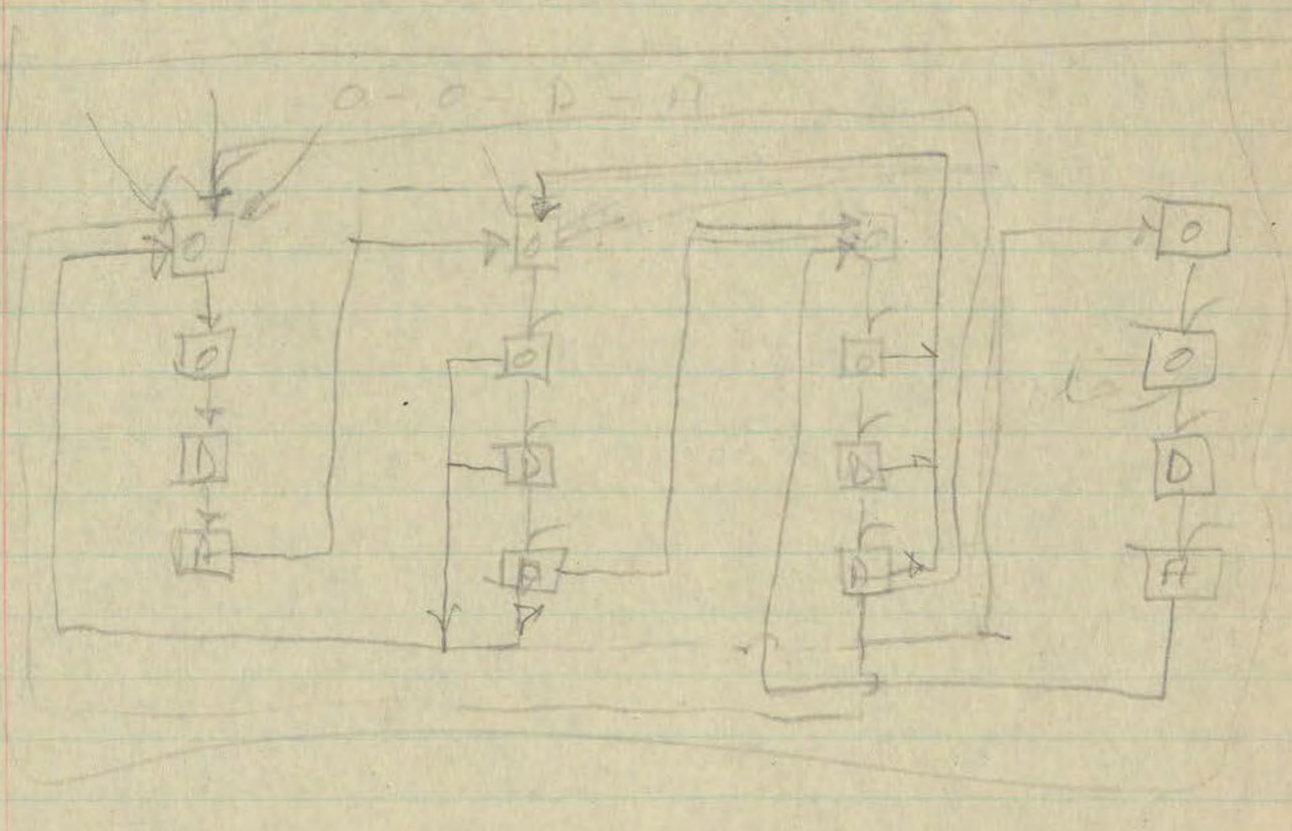


~~E > M > P >~~

T > R > P > S



Alan Robinson

[redacted]

(Shimp)

~~11 Sept 82~~ 11 Oct 82

III

Command and Control

- Command must interact with system to shape character or nature of what is to be done.

whereas

- Control must not interact with system but must determine the character/nature of what is being done

why C&C

~~In this sense~~

- Command must give direction ~~as~~ in terms of what is to be done in a clear unambiguous way

while

- Control must provide assessment of what is being done, also in a clear ~~[illegible] way~~ unambiguous way.
- C&C ~~[illegible]~~ together permit one to direct ~~shape~~ what is to be done yet modify that direction by the feedback from the assessment of what is being done.

III

Influence of T on Deterrence and Survival

- Influence of T and E on;
  - Deterrence / Survival
  - Alteration / Maneuver
  - Physical / mental-moral

- Deterrence Workshop since 1985

- Under what circumstances does ~~change~~ chance ~~and interlocks~~ and indeterminism raise its ugly head? W's/C's ⟺ W's/C's

- Under what circumstances does debate make sense?

- ~~Personal Comments on~~
- Personal Comments on military conference

- After action report

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why 11 Oct 85

II

Command ~~must~~ must interact with system to shape character or nature of what is to be done

whereas
Control must not interact ~~but~~ with system but must determine the character or nature of ~~interact~~ of what is being done!