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Embassy security proposal criticized

By Warren Strobel
THE WASHINGTON TIMES

Critics of an administration plan to spend $4.4 billion to upgrade security at U.S. embassies say the program is unmanageable and will still leave American installations abroad vulnerable to terrorist attacks.

"They [the State Department] don't know how to spend what they've got now," said one Reagan administration official. "The folks don't handle money like you would at home."

"All of a sudden they're going to be spending twice as much money as they're used to," said an official with American Foreign Service Association, a union for foreign service officers. "What does that say to you? That's a lot of money coming down the pike."

Both critics spoke on condition that they not be identified.

But David Fields, an assistant secretary of state, told the Senate Anti-terrorism Caucus yesterday that the Senate should approve the program swiftly because several U.S. embassies located on busy streets in world capitals are "sitting ducks" for fanatical suicide terrorists.

Libya's official radio yesterday called for Arab suicide squads to attack U.S. embassies worldwide following armed clashes between U.S. and Libyan forces in the Gulf of Sidra.

The construction program, already on the State Department drawing board, is among several recommendations made last June by a special panel appointed by Secretary of State George Shultz and headed by retired Adm. Bobby Ray Inman, a former CIA deputy director.

Mr. Inman, a former director of the National Security Agency, said yesterday that State Department officials who advocate upgrading security abroad in a piece-meal fashion aren't fully focused on the problem.

"Doing things the way they were done in the past will not adequately protect this country," Mr. Inman said.

The largest overseas peacetime construction project in U.S. history, the embassy security upgrade program calls for the construction of 70 new embassies and other facilities, the relocation or renovation of 23 and the rehabilitation of eight more.

"I don't know whether they [embassies] have to be hardened or not, but I do know that won't solve the problem," said the administration critic.

"If I was looking at this program, it would be as a go-slow kind of thing," the administration official said. "Protect only the places that have to be protected."

Peter Smeallie, director of a National Academy of Sciences panel that studied how to build more secure embassies, said, "There was a lot of concern that the embassies that are being selected for relocation or reinforcement are not the best ones."

Mr. Smeallie noted that one of the three criteria developed by a special commission to relocate an embassy or other facility was the condition that it not have a 100-foot setback from the road.

"Basically you're not going to do anything at the London embassy; it's a landmark," Mr. Smeallie said. "They're not going to move out of there because they don't have a 100-foot setback. They don't have 5 feet."

"London is a big question mark. I'll be the first to admit that," Rep. Dan Mica, a Florida Democrat who is the chief House advocate of the funding hike, said. "We don't know what we're going to do there. We [the buildings] are essentially hanging out on the street there on three or four sides."

Mr. Mica conceded the State Department has had problems managing construction efforts using the recent construction of an embassy in Egypt as "a textbook case of disaster. Everything that could go wrong went wrong."

But, Mr. Mica said, "We went to extraordinary lengths to write this [setback] condition [into the security upgrade plan], because of our concern over their past track record.

"Because we have these concerns doesn't mean we shouldn't try to address these very critical — life-saving if you will — needs that have been identified," he said.

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STATINTL

Artificial intelligence: Scientists try to create a thinking machine

First of two parts

By J.H. Doyle
THE WASHINGTON TIMES

AUSTIN, Texas — Inside a gleaming office complex, some of the nation's brightest computer scientists, linguists and psychologists are trying to tutor a very dumb student.

What children pick up easily, the most powerful computer fumbles: Human language and common sense are still the biggest stumbling blocks in creating a new generation of "thinking" machines.

Undeterred, a 24-member Artificial Intelligence team is spoon-feeding a computer program with thousands of scraps of knowledge, as well as giving it grammar and vocabulary lessons.

Their goal is to cram the machine — a mindless array of thumbnail-size silicon chips — with enough facts, rules-of-thumb and human language skills that it may begin to think and learn on its own.

Here, at the Microelectronics and Computer Technology Corp. (MCC), a joint research and development venture backed by America's corporate giants, the future is being built.

MCC is "pushing back the frontiers of science," said its chairman, retired Navy Adm. Bobby R. Inman, who previously served as deputy director of the Central Intelligence Agency.

Article by article, the team of researchers is dissecting an encyclopedia, then encoding its contents into the computer's memory bank. For example, all the facts presented in an article on "flight" are encoded, plus the underlying knowledge about the world needed to understand the article.

They are feeding the machine thousands of bits and pieces of common sense: If you're out in the rain, you get wet. If you drop something, it falls to the ground. An object can't be in two places at once. Each person lives for a single interval of time.

They also are teaching the computer about itself. "It has to understand that it is a program," said a scientist. "It needs to know that a human being is watching it."

MCC, which began its high-stakes research in January 1984, is owned by 21 U.S companies, including Rockwell International, Honeywell Inc., and Bethesda-based Martin Marietta Corp.

MCC's goal is to create a variety of new computer technologies for the 1990s and beyond — passing along the fruits of its research to its shareholder companies to give them a head start over foreign competitors in designing new products and services.

The $65-million-a-year project has resulted in a remarkably high degree of cooperation between otherwise archrivals. At its Austin headquarters, one-third of MCC's 410 employees are on loan from the various firms.

MCC is one of the new heavyweights of artificial intelligence — the discipline that has already taught computers, among other things, to play chess and to help perform medical diagnoses.

Researchers at MCC and a handful of laboratories are trying to build a "fifth generation" computer capable of reasoning its way through tasks in the home, at the workplace and on the battlefield.

But when asked to explain what makes machines "intelligent," a computer scientist is likely to talk in circles.

" 'Artificial intelligence' is trying to do things we don't know how to do yet," said Marvin Minksy, an AI pioneer at the Massachusetts Institute of Technology. "But that's a working definition. It changes every year.

"Twenty years ago, having a machine recognize a picture or play chess or understand simple language would have been out of reach," he said. "It's sort of a moving horizon."

Even before the first generation of vacuum-powered computers, men dreamed of building machines that mimic human thought. But efforts over the past 30 years to make a flexible computer have fallen short.

Powerful, number-crunching computers can analyze vast amounts of data, spit out amazing mathematical solutions and guide an unmanned probe to the outer reaches of the solar system. Yet these machines have no inkling of human goals and beliefs, no sense of the world or their place in it.

Jonathan Slocum, MCC's director of "natural language processing," believes that words provide a key to machine intelligence.

His reasoning is simple: A child's ability to learn about the world is closely tied to his use of words as symbols. Digital computers have no grasp of the meaning of words or what lies beyond them. And these machines will forever lack common sense until they are able to communicate with, and learn from, people.

But what might seem like a simple task — teaching English to a computer program by cramming it with grammatical rules, words and definitions — has proved to be a monumental endeavor.

"We would be very happy if these machines were as effective as a 4-year-old child with respect to the grammar," Mr. Slocum said.

Home computers can mimic verbal skills by using sentences to display a problem's solution. But faced with interpreting sentences, advanced computers — which rely on limited vocabularies of narrowly defined words — break down.

Simple conversation, as it turns out, takes an enormous amount of information processing at incredibly high speeds.

"We rarely perceive ambiguity in something someone says," Mr. Slocum said. "[But] almost any sentence you hear a human being utter will be ambiguous."

Depending on its context, the word "ball" in a sentence could mean a dance, a round object used in sports or a good time. Similarly, a simple sentence might contain 10 words with an average of three definitions each.

"We don't consciously review all the interpretations. Human beings select one and go with it almost all the time," Mr. Slocum said. "If your confidence [in your first interpretation] is high, you're not going to stop the speaker.

"If your confidence is low," he said, "you may stop the speaker and ask whether he meant this or that."

Mr. Slocum is writing a computer program in which his "linguist's intuition" is encoded in plausibility

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scores: the mathematical probabilities for the likelihood that a statement is true.

Dissecting a sentence, his computer program assigns plausibility scores for the possible meaning of each word, and then applies "rules for combining plausibility factors" as it examines each element.

Future computers will recognize, he said, when to accept at face value its first interpretation of a sentence, when to ask for clarification and when to say "I'm confused."

"Four-year-olds are quite good. They know most of the grammar that an adult does," he said. "They don't know all the grammatical structures that exist in the language, but they know a great majority of them."

It will take a major scientific breakthrough, he said, for computers to use metaphors, idioms and similes. After all, how does a literal-minded machine catch the meaning of phrases such as "cry a river of tears," "kick the bucket" or "she is like a rose"?

What Mr. Slocum's computer program lacks in grammar skills, he hopes to bolster with a working vocabulary of 20,000 words. Future computer programs, using complete dictionaries of words and multiple interpretations, will have "vast proficiency, outstripping any human being," he said.

Meanwhile, MCC's artificial intelligence team is bringing up baby — feeding the computer program with more facts about humans, the world and itself.

The computer is a blank slate, said Douglas B. Lenat, an AI project director at MCC. "We're bootstrapping it up to the point where it will be a reasonable student.

"The more you know, the more easily you can learn," he said. "If you start out a [computer] program that knows next to nothing, it's hard for it to assimilate new pieces of information.

"But children already know so much about the world," he said, "that it's very likely that they'll have something they can hook new experience onto and thereby relate."

Future computers, he said, will examine a problem — for example, a battlefield situation — and decide what problem-solving strategy to employ, "introspect" to see if it's making progress and take another tack if needed.

"That kind of behavior leads to something that appears very much like consciousness," he said, which is "largely the ability to introspect on what you're doing. . . ."

Computer "programs have a form of consciousness," he said. "They have to be conscious of why they do what they do. You can stop it at any point and ask, 'Why did you do that?' and it will tell you after a fashion."

But a new generation of superfast computers with huge memory banks will be required if machines are to learn English and "get smart." Researchers at MCC and a few other U.S. and Japanese laboratories are developing "parallel processors": networks of tens, hundreds and even thousands of computer chips — each with a separate memory bank — that work in concert to solve a problem.

Others are creating new computer languages for parallel computers that can correctly divide problems into sub-problems — for instance, examining different parts of a sentence.

"Hopefully, 10 years from now," said Mr. Lenat, MCC will have taken a giant step toward building a new generation of machines with some degree of common sense.

"But until computers are smarter than they are now," he said, "most questions they ask will be stupid."

Tomorrow: Machines that change the world?

WASHINGTON POST
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Whitworth Spy Trial to Open

Defendant Last of Four in Walker Ring

By Ruth Marcus
Washington Post Staff Writer

SAN FRANCISCO—The trial of retired Navy communications expert Jerry Alfred Whitworth is to start in federal court here this week in a case that should provide the fullest public picture yet of the damage allegedly caused by the Walker spy ring and an unprecedented glimpse into the arcane, supersecret world of military communications and codes.

Whitworth, 46, the last of four Navy men charged in the Walker espionage ring to appear in court, is charged with 13 counts of espionage, conspiracy and federal income tax violations.

The government alleges that, from 1974 until John Anthony Walker Jr.'s arrest May 20, 1985, Whitworth conspired with Walker to pass classified defense documents and information. He received more than $332,000, according to the government.

A senior chief radioman when he retired from the Navy in 1983 after a 21-year career, Whitworth "received training in virtually all aspects of Navy communications and served both at sea and at Navy bases ashore in positions that permitted him access to a broad spectrum of sensitive military communications," according to a federal indictment.

The most sensitive of the information allegedly funneled to the Soviets was "cryptographic keylists and key cards," the daily-changing codes that are used to encrypt and read classified messages, along with technical manuals and design plans for the coding machines themselves. With the "logic diagrams" contained in the manuals, prosecutors said in court papers filed last month, "a sophisticated adversary having modern computer capabilities" would have been able "to recreate the encryption machine."

Armed with both pieces of the cryptographic puzzle, sources familiar with the technology said, the Soviets would have been able to listen freely to some sensitive Navy communications. The Whitworth trial is expected to disclose what channels of communications may have been compromised and how sensitive they were.

The star witness at Whitworth's trial, which is expected to last eight to 10 weeks, will be his Navy colleague and close friend Walker, 48, a retired Navy chief warrant officer and Norfolk private detective.

Walker masterminded the espionage ring that included his brother, retired Navy Lt. Cmdr. Arthur James Walker, 51, and John Walker's son, Navy Seaman Michael Lance Walker, 23. John Walker's agreement to testify against Whitworth provided a crucial link in the prosecution's case, which until then was largely circumstantial.

John Walker pleaded guilty in federal court in Baltimore Oct. 28 to conspiring to commit espionage with the two other Walkers and Whitworth. Under the plea agreement, he is to be sentenced to life in prison. He promised to testify against Whitworth in return for a reduced sentence for his son, who also pleaded guilty and will be sentenced to 25 years.

Arthur Walker was convicted Aug. 9 of giving John Walker two reports marked "confidential," the lowest category of classified information, from VSE Corp., a Chesapeake, Va., firm where Arthur Walker worked as an engineer.

If U.S. District Judge John P. Vukasin Jr. permits it, Arthur Walker and Michael Walker are also expected to be called on by prosecutors to corroborate John Walker's story—marking the first time either will have detailed publicly his espionage activities. According to court documents, John Walker urged his brother to "operate like Jerry, who was making big bucks" photographing classified documents for John Walker.

John Walker's ex-wife, Barbara Joy Crowley Walker, and his daughter, Laura Walker Snyder, whom John Walker tried to recruit to spy when she was an Army communications specialist, are also on the government's list of potential witnesses, as is Pamela K. Carroll, a former girlfriend of John Walker.

In addition to the first public statements by Walker about the origins and operation of the spy ring, the trial will feature testimony by Earl Clark, the former deputy chief of communications security at the National Security Agency, who is to discuss the importance of secure military communications and explain to the jurors how the coding machines and cards work. Clark is expected to bring one of the coding machines into court to demonstrate its operation.

The government's witness list includes Bobby Ray Inman, former director of the National Security Agency and former deputy director of the CIA; Vice Adm. Robert E. Kirksey, the director of the Navy division that handles cryptography and communications; Rear Adm. Lawrence Layman, head of naval communications, and Gerald Richard, an FBI expert in Soviet spy methods, or "tradecraft."

On June 12, nine days after Whitworth's arrest and at the height of public attention to the Walker case, Chief of Naval Operations Adm. James D. Watkins provided the first official assessment of the potential damage done by the ring. He said that the loss appeared to be "very serious" but "not catastrophic," and that the biggest damage was in the area of communications.

Whitworth's trial will offer the first public damage assessment since then—other than testimony at Arthur Walker's trial, which was limited to the two reports he passed to the Soviets—and the first since Walker agreed to provide details about the operations of the spy network.

The defense case will focus primarily on attacking Walker, according to defense lawyer James Larson. "We think the central issue in

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the case really is the credibility of John Walker," Larson said. He said the defense will attempt to undermine Walker's story by "going into what he says very thoroughly and very carefully."

Larson said he planned to call some defense witnesses, unlike lawyers for Arthur Walker, who rested their case without presenting a defense. But, Larson said, "A lot of our defense will consist of cross-examination of their witnesses, not necessarily presenting alternative" witnesses.

One potential defense witness is Whitworth himself. In papers filed Feb. 7, defense lawyers argued that the case against Whitworth should be split in two, with the espionage charges tried separately from the tax counts. Although they did not explain why, defense lawyers Larson and Tony Tamburello said Whitworth "wishes to testify concerning the espionage charges but not the tax and fraud allegations." The motion to sever the charges is pending.

Vukasin is to hear arguments today on a renewed bid by Assistant U.S. Attorneys William Farmer Jr. and Leida B. Schoggen to introduce a series of letters to the FBI from "RUS" offering to expose a "significant espionage system." Prosecutors contend that Whitworth wrote the letters, but Vukasin has ruled against their introduction.

Jury selection, which is expected to begin tomorrow, is expected to consume a week because of the publicity the Walker cases have generated.

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Whitworth was sitting at the personal computer in his Davis, Calif., mobile home on the morning of May 20, 1985, writing a letter to John Walker, when two FBI agents rang the doorbell.

Walker, they informed him, had been arrested and charged with espionage. "I was dumbfounded and didn't respond immediately," Whitworth wrote in an affidavit . . . . "I don't exactly recall my response, but I think it was something like, 'I don't know what to think.' "

Hours earlier, FBI agents had arrested Walker in a hallway of the Rockville Ramada Inn. Agents trailing Walker had seen him near a secluded site in Poolesville, in western Montgomery County, where they later found a bag disguised as trash and filled with classified documents from the aircraft carrier USS Nimitz, where Michael Walker was working as a clerk in the ship's operations department.

Also contained in the bag were two "Dear Friend" letters from Walker to his Soviet handler. " 'D' continues to be a puzzle," Walker wrote. "He is not happy, but is still not ready to continue our 'cooperation' . . . . My guess . . . he is going to flop in the stockbroker field and can probably make a modest living in computer sales." Walker included two "Dear Johnny" letters from "D" himself, which discussed, among other things, "news about Brenda's job prospects."

Whitworth's wife is Brenda Reis; Whitworth, who had retired from the Navy in October 1983, was studying to be a stockbroker, having decided to abandon the idea of computer sales.

FBI agents had already been alerted to Whitworth's possible involvement by two "confidential informants" later identified as Barbara Walker and Laura Walker Snyder, who told them of West Coast man named "Jerry Wentworth" who was allegedly part of the spy ring. In a search of Walker's Norfolk house, agents found—among other things—papers that identified "D" as "Jer," and handwritten notes that dealt with secure Navy communications systems and that contained one of Whitworth's fingerprints, according to court papers.

Two weeks after they first knocked on his door, the FBI issued an arrest warrant for Whitworth, who turned himself in at the FBI's San Francisco office.

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As portrayed in the indictment, the espionage conspiracy between Whitworth and Walker started in 1974 at a meeting in Boom Trenchard's Flare Path restaurant and bar in San Diego.

The Navy colleagues had met a few years earlier when Whitworth was a communications instructor at the Service School Command in San Diego and Walker was assistant director of the Radioman "A" school there. Walker had been spying for the Soviets since 1968, but by 1974—two years before his retirement from the Navy—he had apparently decided to expand his operations.

At Boom Trenchard's, the indictment alleges, the two men "formed an espionage partnership whereby Walker would eventually be responsible for the transportation and sale of classified information and Whitworth would be responsible for obtaining such information, the profits from the enterprise to be split equally between them."

JERRY ALFRED WHITWORTH
. . . espionage trial begins this week

The indictment details a series of more than 20 meetings, in California, Norfolk, Hong Kong and the Philippines, at which Whitworth allegedly passed classified information to Walker. The meetings were often followed shortly by meetings betwen Walker and his Soviet contact, according to the indictment.

In addition to the charge that he conspired with Walker to commit espionage, Whitworth faces eight counts of espionage for allegedly passing Walker classified information from the aircraft carrier USS Constellation, the USS Niagara Falls, the Naval Telecommunications Center at Alameda, Calif., and the nuclear aircraft carrier USS Enterprise. At those postings Whitworth held increasingly responsible jobs in communications, with access to intelligence messages and coding material.

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Whitworth, a balding, bearded, studious-looking man who has been held without bond since his arrest, grew up on a 600-acre wheat and soybean farm in Muldrow, Okla., near the Arkansas border. He was voted "class clown" at Muldrow High and left home at age 17. He joined the Navy in 1962, and he specialized in communications in a career that took him across the globe.

Whitworth's uncle, Willard Owens, said Whitworth "sounds great" despite nine months in jail and remains optimistic about his chances for acquittal. "He believes that he's going to come free of the thing," Owens said.

His twice-weekly conversations with Whitworth, he said, touch on the monotony of the jail food and the newspapers and magazines Whitworth has been reading, but they mostly focus on life in Muldrow.

"We talk about things here at home mostly," he said, "about the farm and the way it used to be and the way it will be when he comes out."

Prosecutor: 'The Best Job a Lawyer Can Have'

William S. Farmer Jr., the chief prosecutor in the Whitworth case, believes that being a federal prosecutor "is the best job a lawyer can have."

A banker's son who grew up in the South but fell in love with San Francisco "after having taken one cable car ride," Farmer, who is known as "Buck," started in the San Francisco office of the Justice Department's antitrust division, working on oil mergers and timber bid-rigging cases.

He switched to the U.S. attorney's office in 1979 in order to get more trial experience, but he still likes to handle complex cases. "The quick case, the routine stuff is not so much a challenge because . . . one person's dope case is going to look like another person's dope case," said Farmer, a graduate of Princeton University and the University of Texas Law School.

Farmer, 44, who is being assisted at the trial by Assistant U.S. Attorney Leida B. Schoggen, worked on the espionage case against James Harper, an electronics engineer who helped his wife sell stolen documents from a Palo Alto, Calif., defense contractor to Polish intelligence agents. Harper pleaded guilty in 1984 and was sentenced to life in prison.

But the most memorable of the cases handled by the U.S. attorney's office during Farmer's six years there was one that involved him a bit too personally.

Farmer was sitting in his office one day in 1982, he recalled, when "just on a whim" he chose to accept a collect telephone call from an inmate at Lompoc Prison. Farmer had successfully prosecuted a Colombian cocaine dealer, Jose Robert Gomez-Soto, who was serving time at Lompoc.

The inmate caller, Leon (Magic) Colburn, told Farmer that Gomez-Soto was plotting to assassinate Farmer, the federal judge who had sentenced him, several witnesses and federal agents.

"Magic" was supposed to be the hit man, and the FBI arranged to have him cooperate, but there were some nerve-racking days, Farmer recalled, "when I was worried to death that 'Magic' wouldn't be taken out of prison and Gomez-Soto would go through some other line of communication [to arrange the hit] and we wouldn't know anything about it."

The plot was foiled, and Gomez-Soto and his son were eventually convicted of conspiracy to murder, but "it was a harrowing experience," Farmer said. "At the time I didn't appreciate the fact that I was scared."

— Ruth Marcus

Larson Takes on 'Most Challenging' Case

Jerry Whitworth's chief defense lawyer, James Larson, is no stranger to defending underdogs.

A graduate of Stanford University and UCLA law school, Larson said he was active in "the movement" during the 1960s and ended up representing "draft resisters, black liberation groups, prisoners and alleged lefties."

The most celebrated was Wendy Yoshimura, a Symbionese Liberation Army member captured with heiress Patricia Hearst in San Francisco in 1975. Yoshimura was convicted of illegal possession of weapons and explosives in connection with terrorist activity in Berkeley, Calif., in the early 1970s.

"Philosophically and politically I am always concerned with the abuse of power by the government, and I think there are a lot of interesting intellectual and moral issues involved in criminal law," Larson, 42, said in a recent interview.

The Whitworth case is Larson's first espionage trial, and "it's definitely the most challenging of all," he said. "Particularly in this case, you've got the full weight and power of the government coming down on an individual, and the drama basically takes place on the front page of the newspaper. It really calls upon every resource that you've got to defend him."

Larson has been working full time on the Whitworth case for about six months. His cocounsel is Tony Tamburello, who has simultaneously been preparing to handle the retrial of Larry Layton, former People's Temple member charged with conspiracy in the 1978 slaying of a California Democratic congressman Leo J. Ryan at Jonestown, Guyana.

Tamburello's fees are being paid by the government because—although the federal death penalty for spying has been invalidated—espionage under the law is still technically a capital crime that entitles a defendant to a second lawyer.

"I'm certainly looking forward to a resolution of the case," Larson said. "I think it's going to be a very interesting trial."

— Ruth Marcus