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### Possible POW Signals

Because a photograph of a possible pilot E&E symbol equates to a form of physical evidence, this investigation examined possibilities, to which a tangible comparison could be made to known facts. As a hypothetical example, would a four digit number seen on a photographic print from the mid-1980's, and which matches a classified authenticator number of a pilot listed as MIA, constitute evidence of a living POW? This was a critical question to be addressed by this investigation.

If a POW still were being held captive in Southeast Asia after Operation Homecoming, he would, inter alia, rely upon his survival training to attempt to communicate with potential rescuers. This assumption led investigators to an examination of "overhead imagery" -- photographic copies of images obtained by various collection methods as viewed from an aerial perspective-- to determine if symbols were being written on the ground in Southeast Asia after Operation Homecoming. Not only was the existence of the symbols important to the Committee, the Committee was also interested in follow-up actions taken by the Government to any symbols that had been detected.

It rapidly became quite clear that part of the answer to the existence of symbols lay in "imagery interpretation" or "imagery analysis." Because of the technical characteristics of the form of collection, the resolution -- or precision of detail -- of the objects shown on an image can lead different viewers to different interpretations of what is depicted. The interpretations are based partly on scientific analysis -- the measurement of the size of an object, for example -- and partly on subjective reasoning. All-source analysis helps to put an object's origins into context.

In several aerial photographs of Southeast Asia, Committee investigators detected the appearance of suspicious markings on the ground that could have been made by people wishing to signal their presence to an airborne viewer. The significance of this to the POW issue was immediately obvious. The Committee asked JSSA to determine if the markings corresponded to symbols provided to pilots during the war. During the course of this evaluation, JSSA identified what appeared to be additional symbols and numbers, some

of which corresponded to authenticator numbers, escape and evasion symbols, western-style surnames, or numbers relevant to years of the Vietnam War.

The Committee was faced with two principal arguments put forward by DIA. First, while DIA concludes that two symbols clearly existed on the ground, DIA's analysis concluded that the remaining markings were unintentional phenomena of man, nature or the photo process. For example, DIA resolved that some of the possible symbols were the results of a combination of thickened rice paddy dike walls, shadows, burn marks in field, tree, logs, and rice residue from stacking of harvested rice. JSSA testified that the use of thickened rice paddy walls, burn marks, logs, trees, man-made-objects such as stone walls and leaving rice residue in the ground as a means to leave a signal, are consistent with SERE training. On the two symbols which DIA concluded were intentional symbols, the 1973 "TH" photo and the 1988 "USA - possible K," DIA cannot explain their origin.

It was thus necessary for the Committee to determine if such symbols would be consistent with standard methods and training taught to pilots during the war. In this regard, the Committee has received written assessments from the proponent agency for training the creation of pilot distress signals, the Joint Services SERE Agency (JSSA), as well as testimony in depositions and hearings, whether these symbols appear to be consistent with SERE training.

JSSA was not asked to perform photo interpretation, only to assess whether the possible symbols seen on photos match known distress symbols used during the war and judge if they appeared to conform to methods of manufacture taught to pilot during survival training.

As the Committee learned during the course of its investigation, these judgements became very problematic. The fundamental problem was to determine if the symbols actually existed as markings on the ground. Nevertheless, JSSA personnel identified what appeared to be other symbols on the print, including a number of 4-digit authenticator numbers at sites of possible symbols detected by DIA.

They correlated 19 of those authenticator numbers with numbers belonging to Americans still missing in Southeast Asia. They also identified what appeared to be a name scratched in a field near a prison compound, in a 1992 photo. The significance of this possible symbol is reflected in testimony received during the Committee's hearing on symbols:

Senator Grassley: Mr. Dussault, did you also think that you saw faintly scratched in the field?

Mr. Dussault: Yes, sir.

Senator Grassley: Without telling us the name, did you

try to match it with the names on the missing list?

Mr. Dussault: About three days later, yes, sir. At first I didn't realize it was a name.

Senator Grassley: Did it match any names?

Mr. Dussault: To my recollection, it did.

Senator Grassley: Did you see, 72 TA 88?

Mr. Dussault: Yes, sir. To my recollection that's what I saw.

Senator Grassley: How did you interpret that?

Mr. Dussault: At first, my first interpretation of that is -- 72 was the year the guy went down. TA was his E&E code letters. And 88 could have been the year he arrived there or the year he left. And that was my interpretation. I don't know if that's even close. That's just speculation.

. . . . Senator Grassley: When you saw 72 TA 88, did it match a person that was missing?

Mr. Dussault: Sir, again, we are talking a year, two letters, TA -- and those are E&E code letters that applied during 1972.

Senator Grassley: when you found the name, though, did it match when that person went down?

Mr. Dussault: Yes, sir.

#### Intelligence Community Assessment

In testimony on October 15, 1992, the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD C3I) provided the results of DIA's assessment. During his testimony, he emphasized several points which helped to clarify the importance of experience in understanding overhead imagery.

He noted that the photograph used for the original analysis was a poor medium from which to draw conclusions. Imagery analysts do not use photographs. Instead they analyze the medium used by the imagery collector. These media are either film or digital representations. When other media -- such as photographs -- are derived from the original form and used for analysis, new information is entered into the image because a photograph represents an "averaging" of the information contained in the original medium. This could provide a potentially false view of what was originally collected by the aerial platform.

The ASD C3I also noted that imagery analysts use several important tools to assist their analysis: high technology high resolution work stations, laser light, or powerful optics. Since some of this technology is classified, he mentioned that during the Committee's open hearing, line drawings would be used to approximate the images that DIA analyzed. In a classified session, however, Committee Members had the opportunity to view the original imagery. With this background, the ASD C3I testified to DIA's assessment of the suspicious markings found on the photographs.

According to the ASD C3I, two sets of symbols are clearly man-made.

The first is the symbol, 1973 TH, taken on July 10, 1973, on the Plain of Jars in Laos. Some interpreters believe that the "TH" could be a "TA" and the 1973 could be "1573." DIA attempted to correlate the four different interpretations (1973 TH, 1973 TA, 1573 TH, 1573 TA) to classic distress symbols, escape and evasion symbols, or personal authenticator numbers. Although there was no exact correlation, the ASD C3I offered several alternatives as possible explanations for the ground symbols. These included: markings made by the crew of a CIA-operated aircraft downed eight kilometers from the site on May 7, 1973; symbols made by Thai personnel captured in the area by Pathet Lao forces; markings made by members of the crew of an U.S. AC-130 gunship downed 300 miles away in southern Laos in December 1972. DIA believes that none of the alternatives are definitive and has concluded that "the origin and meaning of this symbol is unexplained and probably will remain so."

According to DIA, the second obviously man-made symbol is a USA and potential K image taken on January 22, 1988 in a rice paddy in northern Laos near Sam Neua. The ASD C3I testified that CIA discovered the symbols on the image in December 1988 and immediately brought them to DIA's attention. By then, the symbols were no longer visible on the ground, but, according to the ASD C3I, "investigative steps were promptly taken." In the period since the testimony, DIA has furnished information to the Committee which indicates that in November 1992, a joint DoD investigation team has discovered a reasonable explanation for the symbols that existed in January 1988.

The investigation team traveled to the rice paddy in November 1992 where the symbols had been seen four years previously. Permission was granted two days after requesting it from the Government of Laos; it was the DIA that "sat on" the investigation for four years. They interviewed the owner of the field who revealed that his son had "made the USA symbol by copying it from an envelope because he liked the shape of the letters." The envelope had contained correspondence to the owner sent by a family relative living in Colorado in the United States. The owner explained that the 1988 envelope no longer existed, but he produced two recent letters from his relatives in Colorado. The investigators also talked to the son who confirmed his father's explanation and noted that in addition to the USA symbol, he also had made a stick figure

of an airplane and "a symbol he called a dragon head." The son said that he made the symbols by forming arm loads of rice straw into shapes of the letters or symbols and setting them on fire. The investigation team accepted the explanation and noted that local Lao officials seemed surprised by the revelations of the two men.

According to the ASD C3I, DIA discounted all of the other symbols. Explanations of the various suspicious markings varied considerably. Some were discounted because all-source analysts believed that there was no evidence that American prisoners were being held in the area at the time the symbol was made. Other markings were attributed to: shadows; trees; combinations of shadows, bushes and trees; natural scarring of the ground; limestone outcroppings and logs. In his testimony, the ASD C3I emphasized that JSSA personnel are trainers and are not responsible for and have little experience in accounting for MIA's. Moreover, they are not imagery interpreters, do not have imagery interpretation equipment, and do not have access to intelligence information that would enable them to conduct all-source analysis. While well-intentioned, their original identifications lacked the experience and training essential to making such judgments.

#### JSSA Findings

JSSA, formerly the Air Force Intelligence Support Agency, has been the DoD executive agent for POW code of conduct, survival, evasion, resistance and escape training. In 1991, Secretary Cheney designated JSSA the "executive agent for DoD U.S. POW/MIA matters and is responsible for developing, in coordination with the services and DoD agencies" a new DoD directive on managing the services escape, resistance functions and related code-of-conduct issues. It is JSSA that devises pilot distress symbols and trains how to employ them.

JSSA, as documented in written evaluations, deposition and testimony before the Committee, indicated that the 1973 "TH," the 1975 roof-top markings, the 1981 possible 52K," the 1987 possible "arrow P", the 1988 "USA possible K," the possible 1988 markings at Mouang Tan, and the possible name and associated numbers at Dong Mang in 1992 are consistent with standard SERE training, and expected actions that could be taken by a POW in captivity, or having escaped detention. They did not address whether the symbols are shadows, photographic anomalies or unintentional markings, only that they appear consistent with known symbols and methods.

In regard to those markings which DIA assessed to be thickened rice paddy walls, burn marks or residue from rice stacks, JSSA had indicated that any of these would be reasonable methods of clandestinely manufactured symbols and are consistent with SERE practices. Even the clever use of shadows can be used to cast symbols, during certain times of the day. The potential use of natural geographic features to produce symbols, or even portions of symbols, is in fact a method JSSA uses to train pilots under the

most restricted types of conditions.

Although downed pilots ideally would be able to construct signals large enough to be seen from any passing aircraft or satellite, it is the individual's security situation on the ground that dictates how blatant or discreet he must be in the signal's construction. Whether a detainee, under close or continuous observation, or an evader hiding in an area of high enemy activity, either would probably have to muster all his ingenuity to construct a symbol. Accepting the premise that intentional symbols may be scarcely visible or a clever mixture of natural and manmade objects has contributed to the extremely difficult task of confirming the presence of several alleged symbols.

Conversely, one reasonable criticism of the "USA" symbol, is the question of how a POW could have made such a blatant symbol while under detention. The "USA" is clear and unmistakable, while the possible "K" nearby is faint. Of course, assuming the symbols to be legitimate and not a hoax, the "USA K" would not necessarily have to be made by a POW, who was at that time under detention. In theory, it could have been made by an escapee or the boy who allegedly made the USA because he liked the shape of the letters. However, in its June 29, 1992 written analysis of the "USA" symbol, JSSA outlined a possible scenario in which the symbol could have been made by a POW under detention:

If an American crew member were living in this area and part of a labor force working these {redacted} and was part of the {redacted} where he definitely could have made a "K" in the marshalling area by repeatedly walking the same path and ensuring he stacked {redacted} where he needed them to create a "K." If the crew member happened to become frustrated after receiving no response to his "K" signal, it is reasonable to expect him to make progressively more blatant signals, including a "USA."

JSSA goes on to state that:

"While some may consider it unwise to use blatant signals, history has shown that sometimes such signals are the only ones that get the appropriate attention."

DIA determined that with the exception of the "USA" and the 1973 "TH" that all other possible symbols were the result of unintentional acts of man, nature, or photographic anomalies. This gap between what appears on photographic prints as consistent with known SERE training and what disappears on the light table, or appears as shadows or vegetation, is why an independent evaluation was required by the Committee.

Intelligence Community Search for Evader Symbols Since 1973

This is the first Congressional investigation to inquire into this aspect of the POW issue. No other Congressional investigative committee or body has conducted a general investigation into the

possibility that markings observed on the ground may be evidence of live POWs in Southeast Asia.

The Committee was rather surprised to find that neither DIA or CIA imagery analysts were familiar with Vietnam pilot distress symbols, or had a requirement to look for possible symbols, prior to the Committee's inquiry. This was confirmed under oath by imagery analysts from both agencies. Both agencies have since been briefed on the symbols program by JSSA, and now possess this, but there was no evidence to indicate the intelligence community was attuned to watch for possible signals in Southeast Asia after Operation Homecoming.

In the deposition of Warren Gray, an all-source analyst at DIA, was the statement that DIA imagery analysts have always looked for evader signals. This statement, is inconsistent, however, with interviews and depositions of DIA and CIA imagery analysts.

Chuck Knapper, DIA imagery analyst, stated he was unfamiliar with distress symbols before committee investigators asked him about symbols in an interview, in April of 1992. Mr. Knapper is DIA's principal imagery analyst (one of two) dedicated to the DIA's POW imagery task.

He also stated under oath, that although Committee investigators suggested he contact JSSA to become educated in the distress symbol program, he did not arrange for such a briefing until June. During his deposition he was asked:

"So for the first six to seven months that you were working POW imagery analysis you were not familiar with evader symbols?"

Knapper answered, "That's correct."

In response to the question whether he had been looking for evader symbols in the photography before he met with JSSA he replied, " I was not."

When asked if his predecessor had ever given him the indication that evader symbols were something DIA was looking for in prior years, Knapper indicated that he had not.

The Committee found a similar lack of knowledge on pilot distress symbols at CIA, both in interviews and depositions. In a meeting with members of CIA's Office of Imagery Analysis (OIA), analysts admitted they were unfamiliar with distress symbols and had no records or tables of symbols used during the war. Unlike DIA, the analysts at CIA admitted they should have been aware of the program, and expressed sincere interest in receiving as much information as possible. Acting on the suggestion by the Committee, CIA immediately arranged a briefing by JSSA and distributed tables of Vietnam ear evader symbols to their analysts.

In a subsequent deposition, Roger Eggert, a CIA imagery analyst, confirmed what had been learned in interviews regarding his agency's lack of knowledge about this program. He was asked:

"Were pilot distress symbols something that you had ever studied before spring of this year?"

His answer: "No."

"Was it anything - were pilot distress symbols anything that you ever looked for in any of your imagery analysis before spring of this year?"

His answer: "No."

This lack of knowledge about pilot distress symbols is but another example of bureaucratic jealousies or incompetent coordination in critically important analyses.

Contrary to the suggestion of some Committee investigators that "there had not been a purposeful effort to search for distress symbols," some Senators agreed that there has indeed been such an effort. In fact, the two alleged E&E signals given most prominence by the Committee were discovered by U.S. Government imagery analysts. The Committee believes that a recommendation to review old photography, starting from 1973, would divert substantial effort from current operations, would duplicate efforts that have been in place for years, and would cause the expenditure of large amounts of manpower and money with no expectation of success.

Some Members also agreed that JSSA has no imagery analysts available, has no intelligence collection or analysis capability, and has no background in current intelligence operations or analysis relative to the POW/MIA issue. JSSA was not consulted because it was not in a position to offer assistance or information.

The Report states that JSSA concluded that the four symbols in question were consistent with the SERE methods and actions expected of downed pilots; some Members agreed that this statement is misleading to the point it reflects adversely on JSSA. The symbols in question are consistent with expected actions only because they are symbols, they assert. These "symbols" do not relate to any evader signal in use during the Vietnam War.

Another indicator that DIA has done little to address the possibility of distress symbols appearing on photography is its inability to account for the Army's, Navy's or Marine Corps' pilot authenticator numbers. JSSA still preserves those for the Air Force. As recorded in the hearing of October 15, DIA does not know what happened to the numbers.

This is a significant failure for several reasons. First, it



supports the theory that DIA has never taken the possibility of symbols seriously. Mr. Andrews' contention, in the hearing of October 15, that authenticator numbers were not meant to be laid out on the ground is misleading. Authenticator numbers were intended to be used as a means for pilots to identify themselves, primarily over their survival radio, immediately after shoot-down. This was a safeguard against deceptive enemy radio broadcasts, attempting to lure rescue helicopters into an ambush.

In reality, authenticator numbers were used through a number of different media during the war, including ground signals. The "1973, 1573 or 1933 TH" symbol is a probable example of an authenticator being used as a signal, in conjunction with that individual's primary and backup evader symbols.

In theory, therefore, if a POW still living in captivity, were to attempt to communicate by ground signal, smuggling out a note, or by whatever means possible, and he used his personal authenticator number to confirm his identity, the U.S. Government would be unable to provide such confirmation, if his number happened to be among those numbers DIA cannot locate.

#### DIA Investigation of Possible Symbols

DIA attempted to investigate the 1973 "TH" and 1988 "USA" and, in fact, still consider both as open investigations. DIA became aware of the 1973 photograph in 1976 and the "USA" symbol nearly one year after it was taken. The delay in receiving these photos for evaluation must be attributed to DIA inaction and a passive approach to indications of the possibility of live Americans.

The area of the USA site had not been visited before the Committee delegation landed in that valley in April 1992, nearly four years later. According to the testimony of DIA's POW Operations Chief, no other investigation or site visit was undertaken for the other symbols prior to 1992. The possible "arrow and P" symbols detected on 1987 imagery near Ban Nampo, Laos were not discovered until a 1992 review of old imagery, responding to a Committee request. This site is currently under DIA investigation.

DIA Investigation of the "1973 TH" Symbol. A series of low-level photographs clearly showing a set of four digit numbers, followed by the probable letters "TH" or "TA" was first imaged on May 20, 1973, in north central Laos. The site was apparently imaged again, with the numbers and letters still visible, as late as 10 July 1973. DIA did not receive the film, taken by a low-level reconnaissance platform, until 1976. JSSA first received the photograph for review in the mid-1980s.

Some have referred to the photograph as the "Thomas Hart" symbol, because of the "TH" letters stomped in the tall elephant grass. Both DIA and JSSA rule out the possibility that Captain Hart could have traveled some 300 miles from the crash site of his AC-130 aircraft to the location of the "TH" symbol. DIA believes that the

symbol was possibly made by one of Emmet Kay's Hmong crew members who went down with Kay's civilian aircraft on 7 May 1973, some 8 kilometers away. Because Emmet Kay has confirmed he did not make the symbol, DIA has made several attempts to locate Kay's former crew members, but has been unable to substantiate that any one of them made the symbol.

JSSA contends that it is unlikely the symbol, a possible authenticator number followed by a possible primary and back-up distress symbol, was manufactured by Emmet Kay or any of his crew. First, he and his crew members were captured in a relatively short period of time, and it would have been difficult to travel 8 Kilometers to the site of the symbol. Second, non-U.S. employees were not permitted access to classified authenticator numbers and distress symbols. And most importantly, JSSA notes that all were captured within three hours, yet someone had to maintain the "TH" symbol by continuously keeping the elephant grass stomped down, until at least 10 July when it was still clearly visible, nearly two months later.

JSSA also notes that the 20 May 1973 photograph, which had the best resolution among the photos, seems to reveal the number to more probably be a "1933." JSSA stated in their 15 October testimony that they would compare this number with these authenticator numbers still available, to determine if a specific name could be matched. DIA's investigation of this symbol remains open, although determining the fate of its maker after so many years is remote.

DIA Investigation of the "USA" and Possible "K" Symbols. In December of 1988, CIA discovered what clearly appeared to be a large "USA" etched into a rice paddy near the northern Lao village of Sam Neua. It was discovered in a routine search not related to the POW issue, nearly a year after the photograph was taken. It was referred immediately to DIA for evaluation.

DIA imagery analysts determined that the "USA" was man-made and made intentionally to be seen from the air. It measured 37.5 feet by 13.5 feet. Beneath the "USA" some scarring was noted that "may be interpreted as the letter "K" or the numbers "31" or "34," according to a 23 December 1988 DIA imagery analysis. Lack of recent coverage prior to the January 1988 photograph prevented DIA from determining how long the symbol may have been present.

The Committee investigation found no evidence that DIA originally considered the possibility that the possible "K," beneath the USA, might be a pilot distress symbol. Though the "USA" does not conform to any recognized evader symbols used during the war, "K" was in fact a legitimate symbol.

The appearance of a possible appendage on the "K" seen near Sam Neua, which conforms to a classified symbol used during the war, should have triggered a far more aggressive and timely response to investigate the symbol's origins. In fact, however, not one

document in DIA's files dating from 1988 and 1989, mentioned the possibility that the "K" could have been a pilot distress symbol.

When shown the photograph, for the first time in 1992 by Committee investigators, members of JSSA were previously unaware of the photo's existence and moved to the conclusion that the "K" could possibly be a valid distress signal. Mr. Erickson and Mr. Dussault of JSSA restated this opinion in testimony during the hearing of October 15:

Chairman Kerry: Now, with respect to the K up there, it has been referred to occasionally as a walking K. Without getting into great details about walking, does that appear to be a walking K?

Mr. Erickson, JSSA: To me, it does.

Chairman Kerry: It does?

Mr. Erickson: Yes, it does.

Chairman Kerry: And it has the walking appearance, whatever that extra -- I don't want to get into any classified area. Do you believe it's distinctly a K?

Mr. Dussault, JSSA: It to me looks like a K, and that's how I think we ought to consider it. . . . .

Mr. Dussault went on explain why the "USA," though not conforming to known distress signals, should not be dismissed:

Mr. Dussault: Sir, in our training we try to bring out the bottom line, and that is communicate any way you can who you are and that you're there. And if the individual has tried a particular method and it hasn't worked, try something else. And in this case, in my mind, it's a possibility that the individual may have tried over the last 15 years various signals. None of those got any attention, so he's going to go with a blatant USA.

Chairman Kerry: Fair enough. Mr. Secretary (Andrews), do you have any comment on any of this?

Mr. Andrews: No, I don't have a disagreement with Mr. Erickson.

Chairman Kerry: So, you people would accept what they have said as the possibilities and, in fact, you are treating it that way. Is that correct?

Mr. Andrews: Absolutely. We don't rule out that it was made by someone deliberately trying to make a K.

The Committee was unable to resolve its concern over DIA's failure to bring JSSA in to evaluate the "USA" photo, at the earliest stage of DIA's investigation. When DIA was asked in writing to explain why JSSA had not been shown the "USA and possible K" in 1988, DIA responded in a 23 July 1992 memorandum, signed by Mr. Robert Sheetz, DIA, that:

It is the judgement of DIA that the possible "K" evader symbol is most likely not an evader symbol, but is merely the spoil created when the USA letters were constructed by scraping away harvested rice stubble to expose the bare earth. . . . Having judged that the supposed letter K was most likely not an evader symbol and lacking other confirmation that U.S. POWs could be held in the area, DIA did not involve JSSA.

This explanation failed to allay Committee concern, when DIA imagery analyst, Mr. Chuck Knapper, testified in a deposition that the conclusion that the "K" was created by dumping rice spoil, was new analysis from his own evaluation completed in 1992. His analysis thus differed from original DIA analysis in 1988, which referred to the possible "K" as ground scarring, not spoil. This raises the obvious question of how DIA could dismiss the possible "K" as an evader symbol in 1988 because it was merely spoil, as Mr. Sheetz described it, when DIA did not conclude it was spoil until 1992. Therefore, the question as to why JSSA was not shown the photo in 1988, has not been answered satisfactorily.

Through much of the Committee's investigation of the USA symbol, DIA implied that the "USA" symbol was possibly made at the direction of a POW activist operating from Bangkok. DIA admits this has not been substantiated by any evidence, but offers one plausible explanation. As previously mentioned, in late November 1992, however, a U.S. defense team again visited the site of the USA symbol. On that visit they talked to a farmer and his son who stated he made the USA symbol in the rice paddy, based on postal marking on an envelope mailed from relatives in the U.S. It should be noted that the son said he made the symbols by burning piles of rice stalks, versus either dumping spoil or digging.

The Committee has asked DIA what follow-up actions would be taken to confirm the validity of the farmer's, and his son's story, and if they considered the USA case closed. In a letter dated December 17, 1992, forwarded by CDO, DIA responded that:

None of the previous actions underway to investigate the area of the symbol have been halted; as a matter of fact, classified, sensitive collection actions remain active and will be expanded as a means by which to check into the background and credibility of the rice farmer and his sons, and may well be expanded to cover all Lao officials introduced to the DoD team that investigated the symbol. . . . . No one ever said the symbol was fraudulent or that the case is closed.

Changing DIA Analysis of the Possible Symbols. The Committee found it interesting that current DIA analysis often contradicts earlier DIA or CIA analyses, particularly in cases when previous analysis lends credence to the validity of a symbol's authenticity. DIA attributes this to "reevaluations." There are no cases where DIA changed its analysis in the opposite direction. There are two principal examples of this.

On the 1975 Dong Mang roof-markings, where a possible "K" was spelled out in morse-code, DIA dismissed the possibility that this facility would hold Americans by calling it a reeducation facility, that held primarily ARVN prisoners in the late seventies. Their determination was based on refugee reporting. DIA supported their contention that the facility would not hold sensitive American prisoners by showing the Committee a photograph of the facility with its front gate open.

CIA, however, noted in 1976 that the facility was "unique" in the way it was constructed:

Walls within the compound physically and visually segregated the prisoners. . . . It is secluded in a relatively remote area and has an access control point on the road leading to the camp. . . . The visual segregation of the prisoners indicates this was not a forced labor camp.

CIA went on to note that the "only other known prison that used internally walled compounds to segregate prisoners was the former POW compound at Dan Hoi."

In the case of the "52" seen inside a prison garden at a camp in Laos in 1980, DIA states in 1992 that the "52" probably did not exist because of "variations in the size and structure of the possible numbers from observation to observation." This, however, directly contradicts DIA's own analysis from 1980/81, which states in a February 23, 1981, compilation of imagery read-outs over a number of days, that "the number "52" is still visible with no change. . . .this lack of change indicates that the numerals may have been dug into the earth."

CIA analysis at the time is summarized in an extract from a Jan. 6, 1981 "Spot report":

Analysis of further imagery of 30 December 1980 located what appears to be the number "52," possibly followed agricultural plot inside the outer perimeter of the above facility. DIA is unable to ascribe any particular significance to the number, but "K" was given to U.S. pilots as a ground distress signal. It is thus conceivable that this represents an attempt by a prisoner to signal to any aircraft that might pass overhead."

In referring to the "52" symbol in testimony before the Committee, Assistant Secretary Andrews stated that when you look at the "total all-source picture, then I believe that it is not an unexplained symbol." It is noteworthy that multiple reports of possible POWs under detention in this vicinity, including other intelligence sources, met the priority requirement to look for this camp on imagery. (See Covert Operations Section.)

In conjunction with multiple HUMINT reports pointing to POWs being interned here, it was the discovery of the symbols in the camp's garden that energized the intelligence community and triggered a serious reaction by our government, the details of which can not be discussed in an unclassified format. The actions taken do not correspond to intelligence information deemed to be low in confidence. Andrews' conclusion in 1992 clearly was not shared by the Intelligence Community in 1981.

#### Committee Independent Imagery Analysis

The Committee hired two consultants, with years of experience in the field of imagery intelligence, to provide an independent evaluation of those possible symbols presenting the most controversy. Each conducted his own analysis independent of the other and arrived at his own individual conclusion. DIA provided each consultant work space and the necessary equipment in which to perform his analysis, primarily through the use of the IDEX-2 and Zoom-500 work stations.

In addition to being asked to evaluate the "USA possible K" at Sam Neua, the "Arrow P" at Ban Nampo, and the "A5" "LO" markings at Muang Tan, all of which had been previously identified by DIA, the consultants were asked to evaluate the alleged numbers and markings seen by JSSA on prints. This included numerous numbers in the Muang Tan area, JSSA believed to be possible authenticator numbers, and the name and numbers seen in a field outside Dong Mang (Dong Vai) prison, in which JSSA matched to the name of a MIA.

After his initial evaluation, each consultant presented his findings in a written report to the Committee. A second evaluation was performed by each consultant on possible symbols where differences arose. Those symbols on which reconciliation could be achieved, and those where it could not, were then presented to the Committee in a joint report, outlining each consultant's rationale for his final position. Although a consensus was reached on the majority of symbols, key differences remained.

Committee's Independent Consultants. Because DIA asserts these authenticator numbers and names identified by JSSA disappear when enlarged or put on the light table, the Committee employed two independent photography consultants to determine why these "symbols" appear on the prints and if they, in fact, exist.

The two consultants' analyses reaffirmed the conclusion that imagery analysis is an art as well as a science. It often fell to

professional judgement calls on whether faint traces or textures seen on the image were intentionally made, or the normal photographic anomalies common to film processing and mixtures of natural shading and ground vegetation. The principal problem centered on determining whether extremely faint appearances, could have been aged symbols made weeks or months before the image, or possibly discreet attempts to place a symbol, simply because the maker would have been risking his life to construct a more blatant signal. To accept the premise that a POW under detention would only construct large block letters is limiting and would seriously undercut any attempt to conduct an open-minded evaluation.

Both consultants discounted most of the symbols identified by JSSA personnel at Mouang Tan. Most of these were attributed to tonal textures of the imagery media, naturally occurring configurations of terrain, vegetation, soil texture, farming products, and man-made objects (such as buildings). One consultant put a 30 percent probability of the "K" near the "USA" being intentionally man-made as a symbol, while the other assessed a less than 20 percent probability that it was a legitimate symbol.

One consultant initially identified two other suspicious looking markings. He later discounted these as intentional distress symbols for the same reasons as he discounted those identified previously. He noted that even dedicated analysts might initially be led astray by the imagery.

The "fuzziness" of the paper prints and the eye-catching nature of the shadows provided the environment for a dedicated analyst to visualize what he hoped to see through the integration of the random objects -- similar to a "connect-the-dots" puzzle or interpreting a Rorschach test ink blot.

He also added comments concerning the use of shadows to create a symbol on the ground:

The reason that shadow identification is necessary is that they change relative to the terrain, based on the time of day, season, and the taking parameters of the image collection system; therefore, they cannot be used to produce symbols.

The second consultant gave a 60 percent call of confidence on a portion of a possible name seen by JSSA at Mouang Tan. In his final report, he identified seven markings that in his opinion represented either purposefully made symbols or merited further analysis and "special processing." Several of these were possible markings not previously detected by JSSA.

At Dong Mang (Dong Vai) prison, on June 1992 photography, he observed what he believed to be a "GX 2527" etched in a field near the prison. He rated this at 100 percent level of confidence in his initial report, and did not change his position during the

joint review. JSSA has confirmed that "2527" matches the authenticator number of a serviceman still unaccounted for in Southeast Asia. In the same vicinity, he also found a possible name, in which he originally gave a 70 percent confidence call. His position remained unchanged after the joint review.

He also identified what he believed to be the number "1285", possibly followed by a "K" or "2", and "2852" followed by an "X" in 1988 photography of the Sam Neua site. He originally attributed a 50 percent confidence level to those possible symbols, however he determined they were not purposeful symbols in the joint review.

Review of these symbols by the other consultant did not result in agreement. His opinion attributed the symbols to shadows, vegetation or man-made features, such as walls. Nonetheless, the joint review did result in the negation of several other symbols including the "NT 2222", which had been originally identified by JSSA and initially given a 50 percent level of confidence by one consultant.

Since his conclusions left open to question the interpretations of several markings, the Committee requested DIA to conduct a final review of the relevant imagery. For this review, the Committee asked DIA to include analysts from the National Photographic Interpretation Center and CIA.

The special task force reported its findings and conclusions to the Committee in late December 1992. Six analysts, ranging in experience from six to 25 years (for an average of over 19 years of imagery analytical experience) and representing the CIA's Office of Imagery Analysis, DIA's Office of Imagery Analysis, and the National Photographic Interpretation Center, sought to reconcile the final differences between the two outside consultants. The six task force members agreed that, "none of the suspect symbols could be identified as intentionally prepared man-made markings."

Their conclusions on each of the six unreconciled symbols were:

Reported Symbol GX 2527: The consensus of the team was that although portions of what could be interpreted as letters/numbers were observed in the field, they appeared to be too haphazard and ill-defined to be a man-made distress signals.

Reported Symbol PAI/RA1: The consensus of the team was that some of the letters could be discerned; however, the team concluded that they were probably a combination of trails and vegetation and not intentionally prepared man-made markings.

Reported Symbol 232?: The team had great difficulty in confirming the presence of these numbers, leading to the conclusion that whatever was present was a natural configuration and not intentionally prepared man-made



markings.

Reported Symbols 1104 and WRYE: The team was able to discern portions of what could be interpreted as letters and numbers; however, the team concluded that these 'symbols' were probably a result of a combination of shadows and vegetation along the side of the road/trail and not intentionally prepared man-made markings.

Reported Symbol VASYA: The team concluded that it was extremely difficult to discern this 'symbol' and judged that it was a combination of shadows and vegetation on the edge of a field and not intentionally prepared man-made markings.

Reported Symbol 14192: After a detailed review of the area in question all of the team members concluded that the recorded symbol could not be identified on the imagery."

Once again the Committee was confronted with an Intelligence Community consensus countered by a few dissenting opinions.

#### Discussion

A number of questions remain open regarding the issue of possible POW distress symbols. The 1988 "USA" and 1973 "TH" symbols remain unresolved, according to DIA, and they do not dispute they were man-made. Regarding the "K" next to the "USA", Assistant Secretary Duane Andrews, stated in testimony on 15 October 1992, that "We don't rule out that it (K) was made by someone deliberately trying to make a K." The Committee, further notes the inconsistency between past and present DIA analysis on the "52 possible K" symbol at a detention camp in Laos.

The Committee cannot conclude, based on its investigation and the guidance of imagery experts, that U.S. POWs in Southeast Asia have attempted to signal their status to aerial observers. This has been a particularly important part of the Committee's review because the logic of the investigation was clear. Prisoners held against their will might conclude that the best hope for obtaining outside help would begin by them being detected from the air. During their survival training, Air Force - and some Army, Navy and Marine Corps -- pilots were taught how to construct signals using readily available material. These symbols might be visible on imagery obtained by the U.S. Intelligence Community. Therefore, this imagery needed to be examined in detail.

For example, CIA had noted the USA symbol found on imagery taken in Laos and provided it to DIA for further review. DIA's evaluation confirmed the symbol but could not determine its origin. It is important to note, however, the relatively long period between the collection of the imagery and its provision to DIA: January - December 1988. This severely hindered any immediate follow-up action that DIA could take.

The symbol probably disappeared with the end of the seasonal rice harvest. Its maker, if a prisoner, might have been moved in the period between its construction and its discovery. But it took too long to resolve the symbol's origin. While the Committee recognizes that the changing political climate on the POW/MIA issue that is occurring between the Lao and United States Governments largely assisted in allowing DIA to investigate the symbol on the ground in Laos, four years is excessive. The Intelligence Community must respond more rapidly to potential ground-to-air signals identified on overhead imagery.

Comments concerning JSSA's survival training on ground-to-air signalling is beyond the purview of this Committee. Nonetheless, it must comment on the techniques that are being trained. The use of naturally occurring objects to construct signals is fundamentally sound. But the severe difficulty of definitively identifying these signals on overhead imagery is equally obvious. On those images in which the Committee was interested, experienced imagery analysts disagreed with each other's analyses. In addition, the Committee has been shown overhead imagery of areas around the world on which these symbols appear to exist. The relationship of these other symbols to U.S. POWs is extremely tenuous at best. It appears incontrovertible that large-scale alphanumeric combinations exist naturally. These natural occurrences can be quite misleading to any rescue attempts. They certainly caused the Committee to become concerned over POWs signalling their presence in Southeast Asia. JSSA must deal with this in the development and conduct of its training programs on ground-to-air signalling.

#### Recommendations

The intelligence community must respond more rapidly to potential ground-to-air signals identified on overhead imagery. If a possible symbol is the work of a POW, it is vital we visit that site immediately.

- . It is strongly recommended that an interagency task group of experienced imagery analysts be formed to review all available imagery of prisons or suspect detention areas in Vietnam and Laos, after 1973, for indications of possible distress symbols.
- . DIA and CIA should establish a closer and more formalized working relationship with JSSA. JSSA should be consulted immediately, whenever suspect symbols or questionable markings appear on imagery.
- . It is recommended that JSSA be permitted to attend IAG meetings, in an advisory capacity as an additional representative of the Joint Staff.
- . Pilot distress symbols should, immediately, be designated a

priority collection requirement for Southeast Asia.

- . All imagery analysts with responsibilities pertaining to POW/MIA analysis, should be thoroughly briefed and preferably trained in SERE techniques and methods.
- . In the case of the "GX 2527" because the number corresponds to a specific individual, the Committee agrees that the benefit of doubt should go to that possible individual, certainly enough to warrant a "by-name" request by an appropriately high ranking U.S. official to the Vietnamese government, for information on that missing serviceman. In making that request, it should be emphasized to the Vietnamese that there is a basis for questioning whether he could be alive.

These symbols have been energetically pursued and explained to the satisfaction of all reasonable critics, some Members believe. It is also germane to point out that some inexperienced analysts also have been able to find "symbols" in Africa, in the state of Utah; they also can be seen in vestiges of the photo-development process. These "symbols" are in fact indicators which are not man-made, not on the ground and have no realistic basis in fact. Professional examinations have found all of these so-called "symbols" to be invalid.

In addition, some Members agree that the treatment of the "USA/possible K" symbol, the "1953/1973 TH" symbol, and the alleged "52" at a site in Laos are misleading in the extreme. The Report does not describe the extensive investigations conducted by the U.S. intelligence community into these symbols and the findings which relate to the probable origins of these symbols.

Specifically, the December 1992 on-site investigation of the "USA" symbol determined that the symbol was not a distress signal and had nothing to do with missing Americans. Some Members believe that the results of the investigation determined that the symbol was made by Hmong tribe members from Ban Houei Hin Dam village, Huoa Phan Province, Laos.