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Making Intelligence Better
Fred R. Demech, Jr.

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Making Intelligence Better

Fred R. Demech, Jr.

Captain Demech, a career cryptologist, is currently a student at the National War College. In his 25-year career in the U.S. Navy, he has held such varied positions as Special Assistant and Personal Aide to the Director for Command Support Programs on the staff of the Chief of Naval Operations; Executive Officer of the Naval Security Group Activity in Winter Harbor, Maine; Executive Assistant for two consecutive directors of the National Security Agency; and Deputy Comptroller for the Naval Security Group Command and the Cryptologic Officer Detail at the Naval Military Personnel Command. He also served as Deputy Executive Director and then Executive Director of the President's Foreign Intelligence Advisory Board from 1981 to 1984, and later as Commanding Officer of the U.S. Naval Security Group Activity in Edzell, Scotland.

Oettinger: It's a special pleasure today introducing our speaker who is not only knowledgeable, but also a good friend. You've seen his biography so you have some sense of what his background is, and given that background, I had asked him to emphasize the intelligence aspect of our general subject — the intelligence, the eyes and ears of command and control, without which you might command and you might control, but you don't know what the hell you're doing. I don't think it needs much further introduction than that. Fred?

Demech: Thank you. It's a pleasure and an honor. I've been interested in this subject for a long time, since before I first met Dr. Oettinger. In my eyes he's one of the genuine heroes in this business, because of some of the things that we've accomplished, and, of course, this course. I've also been very fortunate to have been associated with many of the speakers who have been here before, some famous people: Admiral Inman, Leo Cheme, Lionel Olmer, the late Rich Beal, and a couple of the Generals, Faurer and Odom, Dave McManus, and Don Latham, who's in Defense right now.

My experience is based on my career, and I've been fortunate to be exposed to the lowest level of a tactical user of intelligence — a single ship at sea, up to the highest level of the National Command

Authority in the White House. We can relate some interesting stories about what goes on in the White House. A lot of the things that you read about in the paper I've had some experience with and knowledge of when I was with the President's Foreign Intelligence Advisory Board. Needless to say, the subject of intelligence is in the paper an awful lot today, and it's an important, important subject. To me, it's one of the most important.

I've also been fortunate to have served in billets that allowed me to get involved in programming and budgeting, where we not only planned for the future but also actually controlled people — bodies, money, and hardware. So I was able to see the entire cycle, the entire picture, and throughout my career I've been fortunate enough to gain that type of knowledge and experience.

Intelligence and intelligence producing, as you know, are nothing new. In my opinion, it's the oldest profession. Anybody who thinks that the other one is older; well, you first had to gather the information about where to find that other thing, and then you had to know how much to pay for it, or how much you were going to pay for it. Of course, we don't have to go back too far to see where intelligence has been mentioned. It's been in the Old Testament. Sun Tzu the Chinese strategist, and all the famous strategists, have talked about the impor-

tance of intelligence, and how to find security without fighting is the acme of skill. I always like to use that because Sun Tzu is one of my favorite people.

People in the United States don't like to talk about intelligence and, in particular, spying, but they should know some of the things that went on back in the Revolutionary War. George Washington was a master of intelligence, and depended upon it, and actually controlled all of our intelligence operations. If Jeb Stuart, the Confederate General in the Civil War, had done his intelligence homework or collected intelligence on Grant's forces at Gettysburg, a lot of people are convinced that the entire complex battle that took place would have changed, and that the South could have won that war. He just didn't get the right type of intelligence, or didn't do any intelligence homework with regard to Grant's forces.

Of course, Pearl Harbor was a failure. Then all of the great successes that we had afterwards were, again, based on intelligence. I just can't over-emphasize how important that is. Most of the great nations of the world have always depended on gathering information from around their world. In the old days they called it information; today we call it intelligence. I like Admiral Grace Hopper, an old Navy admiral. She's had a lot to do with the information explosion that we have today, and she always equated the information process to knowledge. Of course, knowledge, as the old saying goes, is power. It's just one of those things that you can't over-emphasize, as I said.

I like some of the things that Tony Oettinger has said in the past about intelligence and some of its aspects. He said large organizations get information, and for the military we call it intelligence, and the process for carrying it out is command and control. For civilian organizations — by the way, a lot of what I say today relates to the civilian community and the business community — the gathering of that information, and let me quote him correctly, "That civilian managers refer to a staff assimilation of information for line management." Remember when you said that?

Now, you've had a couple of speakers here, I guess Greg Foster and some of the people from NDU, who have talked about command and control, and how important command and control is. I'm not going to argue with them about the central process of command and control, but to me you can't exist without intelligence, and that intelligence makes command and control a success. Again, I talk about Tony Oettinger and again, I'm going to

quote him. I don't know if you've read these things. I hope I'm not embarrassing you, Tony. He said, "Intelligence can be viewed as an outward sense or external sensing function, while command and control, as the internal execution in sensing processor function." I think that's important: where to get that information; where to find that information.

Let me say a couple of things about intelligence, and then bring in some of the more current things that have happened. One, it's not magical; it's not perfect. There are going to be failures. Today, we hear all about our failures. You don't hear a lot about successes. That's the nature of the business, I'm sorry. Intelligence can force change. It can affect policy. There should be a relationship between intelligence and the policymakers. But policy, in my opinion, should not drive intelligence. I don't know if you've seen the Tower Commission Report, or if anyone has. Let me just read a couple of comments, if I may, out of the Tower Commission Report. "Intelligence to support policymaking and implementation was clearly inadequate. Renewed emphasis on the importance of maintaining the integrity and objectivity of the intelligence process cannot be over-emphasized. A matter of concern over the involvement of the NSC was that the strong views of the NSC staff members were allowed to influence the intelligence judgments. It is critical that the line between intelligence and advocacy of a particular policy be preserved if intelligence is to return to its integrity and perform its proper function. In this instance, the CIA came close enough to the line to worry the Commission."

I think a lot of people will say that the NSC drove policy, and the policy drove the intelligence process. A number of organizations have had conferences on intelligence. I don't know if you're familiar with the CSIS (Center for Strategic and International Studies) and Roy Godson's NSIC (National Strategy Information Center). They have sponsored a lot of conferences. One of the things that they've been wrestling with is intelligence policy for the 1980s and the 1990s. How much should a CEO or the President of the United States get involved in intelligence? There are two schools of thought. One, that intelligence should be left to the professionals, that intelligence and the products that are being provided are nothing more than a function of the intelligence, or the intelligence community, that decisions about intelligence should be made by the Director of Central Intelligence (DCI), Mr. Casey, or Judge Webster, and that covert action should be used only as a defensive mechanism.

Counterintelligence should be used only as a defensive mechanism, and should not be part of a regular policy. That's one school of thought.

People are now starting to shift and say that because of all the things that have happened with regard to the Iran problem — Ollie North, Admiral Poindexter — that the President is going to have to get involved more and more in intelligence policy, and use resources at his hand, to make sure that intelligence affects policy. That's a very difficult subject. The same thing is true in the civilian community.

Oettinger: What do they mean, or what do you mean by that? I'm not sure I understood what you just said.

Demech: What I'm saying is, that one school of thought says the President should be involved more in the intelligence process to find out and to determine what assets can be made available to him, that intelligence can tell him answers so that he can implement his policy.

Oettinger: The President as an individual is already overloaded, and the odds of any President, this one or any other, getting more deeply involved in any one facet of anything are pretty slim, because there's no time for anything already. If this means anything, it's got to mean staff, and if it means staff, then it's got to mean either the existing intelligence agencies, or the existing National Security Council, or something new. So the question is, if one wants to put teeth in a statement like that, what do you do about it by way of staff organization?

Demech: I agree. It's not going to be the President. What I was going to lead up to is he's going to have to depend on certain institutions or certain types of support functions to do that, a thing like the President's Foreign Intelligence Advisory Board. Obviously, I have a bias, because I served with that board for three years. I think an organization like that can provide the vehicle for the President, and advise him what can be done to strengthen the intelligence community so that he can get the type of information he needs to carry out his functions. It's the age-old thing: What do you provide to the top man? What do you provide to the lower echelon? Obviously, you're not going to provide them with the same type of product. There's a difference, and it has to depend on what that man perceives as his need. He can't do it himself. He has to have the staff.

I know exactly what happened with regard to Ollie North and Admiral Poindexter. I can see it

happening every day in business and in the military. I have a personal example. They knew exactly what the interests of the President of the United States were, in particular, in trying to deal with the very difficult situation of Iran and hostages. And when he was meeting with the hostages' families every week, or every month, or every other week, people knew that he took an interest in that. I can just see him say, "Do something, or help me get some information on how we can get those hostages released." Well, people took that as a lead and went out and did their thing. I had that example when I was CO of a base. I said one day to my staff, "I don't like the color of my house." That's all I said. The next day the painters showed up. They were going to paint the house. They started to paint the house. I had to stop them. That's exactly, I think, what happened there.

Now, if people broke the law, and my own personal opinion is that probably something was borderline in what they did, they should face the consequences for that. But I can see where they took their lead from the man saying, or somebody on his staff saying, "We need some type of information," and away they went and did their thing.

It's not going to be the President, but the President has got to set the stage. He's got to tell the people what he's interested in. It doesn't only pertain to the President. Most of the intelligence that is produced today in the government is for a single overall customer — the Department of Defense, the military. There are obvious reasons, especially in the past. The Number One strategic threat, in the opinion of many, is the Soviet Union, and the military threat that they convey. More and more information was being used by the military. You'd be surprised how little information is used by other high-ranking policymakers or decisionmakers.

A couple of studies were conducted during the last eight years. Unclassified questionnaires were sent to Secretaries of Departments, Assistant Secretaries, or Deputy Assistant Secretaries; the top three people. "How much do you use intelligence or what do you ask for?" It was shocking what came back. They used very little or none, for a number of reasons. One, they didn't have time. Secretary Shultz does most of his paperwork at night, because the rest of the time he's out speaking or carrying out the function of his department. When you have a stack of stuff this high, he's going to hit the most important things. If he sees a two-, or three-, or four-page report that's single-spaced, he's not going

to have time to devote any attention. So, the people didn't use it.

We found out during the pipeline crisis how many people did and did not use the intelligence that was available on what decisions and how to go. There was a lot of controversy over that.

Student: Pipeline?

Demech: The pipeline crisis; whether or not we should have the Allies help us in preventing the Soviets from building the gas pipeline during the early 1980s. That controversy.

What type of information does the man need? We found out that people said it was too secret, was not reliable, was not timely, and as a result, they didn't use it. Some people, like Admiral Inman, when he was the Deputy Director of CIA, said, "I'll put an intelligence type on your staff to help you, so that you can be advised." Not too many people signed up for that because they didn't want to give up a billet, or body, for intelligence.

I think a lot of that has changed for a number of reasons. One, the increase in sophistication of the world, led by the information explosion, the fact that there are other subjects that are important now to these people (world debt, terrorism), a lot of other subjects related to that — critical resources, oil, relationship with countries, insurgency, low-intensity conflict — and more and more people are saying, "Now, wait a minute. We need information on that. Whom are we going to turn to?" The key, in my opinion, and I've seen it, is the consumer himself, because it's the consumer who tells the community what to produce through a system of requirements, and what type of information he or she needs, or wants.

Student: I don't know whether it has changed or not, but that kind of subject was given extremely low priority, and there was really very little available on things like world debt, or energy.

Demech: You're right, and that has changed. The reason why it's changed is because of surveys like I mentioned. People have gone out and asked, "What do you need?" Plus, there have been certain boards, like the President's Foreign Intelligence Advisory Board, that try to emphasize not only to these people, but also to the intelligence community itself, that there were more subjects than military ones. For instance, there are a number of individuals who believe that the greatest threat to world peace today is the world debt, that if a lot of countries who owe money say, "We're not going to pay our loans," that would expose an awful lot of banks. That might

start a run on money, or lead to the collapse of all the world's greatest financial institutions.

You're talking about banks today that are writing off \$50, \$60, \$70 billion, and as a result, their profits are dropping by \$10, \$20, \$30 million. I just talked to an individual from Chase Manhattan, and they expect their earnings to be \$30 million less in the next six months, because of writing off part of a loan for Brazil. There was a catalyst for that: oil, the controversy over oil. How much oil is available? Was the Soviet Union going to be a net producer, an exporter, or were they going to have to import oil? People took an interest in that. The availability of raw materials. Sanctions on South Africa. Sanctions on other countries. The availability of critical elements like chrome. Where's that type of information going to come from?

Treasury was one of the biggest obstacles in trying to set people in motion to produce information on finances. From open sources, and from obviously classified sources, you can keep track of transfers of money. Most people do it electronically. There's a lot of information available about the transfer of funds. That can tell people a lot of things: where the money is going, if the dollar is going to rise, if it's going to fall. The Soviets have used it masterfully. During the late 1970s, they were able to cause and create disruption in the world grain market through their purchases of grain down in New Orleans. They were able, through intelligence sources, to find out what the price was going to be and then, by saying they were going to buy and then not buy, they controlled the actual price of the commodity. The net loser was the U.S. farmer. That's an example of what's gotten people interested in all of this stuff.

So, you're right. Until recently certain agencies and some of the intelligence community itself were resisting this.

Student: I think you would want to make this distinction. When you talk about intelligence in this sense, what you're talking about is that produced by the "intelligence community," which is a fairly well-defined group of organizations, because I would say that certainly the Commerce Department produces intelligence in the form of market analyses, and other things of that nature. They just don't call it that, but it is information, and it is analyzed, and it does project trends, and it does all the classic things that intelligence does about a particular industry, or whatever it is they're interested in. Some of these other governmental agencies do, in fact, produce their own intelligence. It's not produced by

something headed by the DCI (Director of Central Intelligence), however.

Demech: That's correct. I'm not going to argue with that, but that information was not being used by those other departments and agencies for a useful purpose. Treasury and Commerce were just not working together. The Commerce Department now has their own intelligence unit, and they play in the intelligence community in trying to gather that type of information. Because you're in the intelligence community, it doesn't mean you have to have everything from classified sources, obviously. One of the biggest criticisms in the intelligence community is that we don't take advantage of what's available in the open or overt sources. Overseas you'd be able to gain an awful lot of information in the open sources. You're right in what you said. When I say the intelligence community, I guess it could be viewed the wrong way, but you're right that information is available.

Most of those organizations now have, as part of their overall structure, something to deal with intelligence, because it's proven to be so critical. And again, it can be from any number of different sources. One of the other things that people used to say is that information wasn't displayed properly and they couldn't have it available during a crisis situation.

Rich Beal who was here, I guess, three years ago before he died (God rest his soul), was a tremendous individual. He got to the White House in 1981, and he was shocked along with a lot of other people. There was very little automation. There was little to support the President. The White House Situation Room was like a "horse and buggy." They didn't have access to an awful lot of information that was available to just an everyday person on the street — TV, communications, radio. He went about changing that, based on his experience.

It's interesting to see what happened to him. He built this Center — they called it the Crisis Management Center. It was a crisis management system where he brought together inputs from all different sources in one place. No one paid any attention to him when he was building this thing, and some of the people I was associated with, Dr. Bill Baker from Bell Labs, Dr. Johnny Foster from TRW, Tony Oettinger, all helped in giving him advice on how to build the center. When people saw what was coming together, that in this one secure room you had information, compressed and displayed in a way everyone could understand, they took notice. Not only did they take notice, they wanted to con-

trol it. There was a big power struggle as to who was going to control it. When Beal died and after the Iran thing, they almost closed it down because a lot of information flowed through that place, and that was where a lot of information was on record.

A number of comments on that. People from the intelligence community were very hesitant to play because the information was going straight to the center of government. Not to the President, but to the people who supported the President who could gather that information, bypassing the intelligence community, so to speak. The intelligence community had that information, but it was also available at this center and then they digested it and put it together, synthesizing it themselves, and presented it in a form that the advisors and the President could use. Most of it was put together in a video format, pictures. You know the *USA Today* weather page? You look at it, you don't have to read a thing and you can understand what the weather is just by colors. He did that, and it had tremendous implications, and therein was the problem.

One, people saw what was available. They didn't have it. It was bypassing the hierarchy of the intelligence community, and then they could synthesize it and present it in a form that maybe only the President or his assistants who were right there had.

Student: Who was doing the synthesizing there? The whole point of having an intelligence community is to have a staff, and have a set of organizations who can get together, whether it be on an informal basis as at the analyst level, or on a formal basis when you're putting together an NIE (National Intelligence Estimate), and present a view that the whole community will agree upon. If you have it all bypassing and going to a few folks who work in the Executive Office Building across the street, they have their own little way of pushing the buttons and putting up their own little product, who's to say that that really isn't a reflection of their own mind sets, and what they think is important?

Demech: That's always a problem you can run into. The synthesizing was done in various steps. I'm not saying that the intelligence community was bypassed completely. A lot of the information that was coming into this Center was coming through the intelligence community. They may have gotten the information at the same time. There were people — experts — put into the White House from the intelligence community to synthesize that information and put it together. Biases? They were trying to prevent that by having people who were not beholden to any one community, and were working just for

the President. Now, were they putting information together just because the President wanted to hear that? That's always a problem that you run into, and that's what's evidenced in the Tower Commission Report.

Oettinger: It might be worth stopping here for a couple of minutes and noodling that around a bit, because my sense is that this question is at the heart of why these matters are difficult and why they are subject to perennial controversy and perennial adjustments in how you go about doing it, because it's not clear that there is a satisfactory solution. Going back to my earlier point, asking Fred whom did he mean when he said "the President," if you mean literally "the President," then he hasn't got time to do the synthesis. There may be, once in a while, a President who can personally do the synthesis on a subject. It's got nothing to do with personality, or age, or anything. No human being of whatever age or competency can cover the scope of the things that are by law and by the Constitution vested in the President of the United States.

Now you say, where does the synthesis take place? If it does not take place in the President's head, which in most instances it doesn't, then what happens? Well, then it takes place in the staff. Does that staff have access to it, or does it gather its own means? If it gathers its own means then it soon pretty much becomes another bureaucracy. Okay. Then you're back again at the question, if that's a bureaucracy within an entrenched framework, who *then* does the synthesis and thinks of it in terms of the boss? Or conversely, it does not do that and it's still very staffy, but then it is dependent on the folks who do the actual stuff, who will then be jealous, and you get into what Fred is describing as the controversy between the "President's people," such as they were. It's an unstable situation. If one could invent some kind of miraculous or sensible approach to this, it would be great, but I'm not sure it's possible.

Demech: Well, I don't think it is. Each set of circumstances is different, and each President, or administration, is going to set its own standards, or its own policy. The people like Rich Beal felt that there was a lot of information available that was not being utilized because: (1) they couldn't get it quickly; and (2) there wasn't any forum where it could be used really quickly. You're talking about a lot of data. You're talking about different circumstances. You're talking about a number of crises, and they felt this was the way to go. The resistance from the intelligence community is obvious, as you

said, and that's why they at first resisted it. That's why, to help offset that, they assigned their own people there. Were they coming up with different conclusions than the intelligence community? I would say very little, because the information was the same information. They were looking at it. It was just a time element more than anything else.

Student: We've had other examples when the same information led to radically different conclusions.

Demech: Yes, you're always going to. The human being provides the judgment factor in the intelligence community even when you have machines. The human being also could be your biggest problem. I don't think there's any answer that's going to allay your fears or anyone else's. It's a fact that the center of power wanted that type of information available.

Student: Another outside criticism that I've heard about was that by making this into a videotape format, by making pictures, making it simple, you tended in the end possibly to cut out a lot of the nuances that never really got put into that sort of a format. It got to a point where some considered that really the whole picture wasn't there. Only the nice things were there. I'm probably not expressing it well.

Demech: I understand, and you run that risk. But let me explain a couple of things or give you a couple of examples. Let's start at a lower level and then work up to the White House. I have been at sea and one of the problems you have on a ship at sea is information and how to get that information. In the past everyone at sea wanted all the information, and as a result, you were inundated. We have some really fantastic communications systems that can really pump a lot of data to you, but it was always in something that you had to read.

Today you can send a picture, like the *USA Today* weather page, and it's in five colors and it's a picture that shows you red forces, blue forces, it has arrows where the ships or planes or any other types of unit are heading, and it gives you the complete tactical situation. Is any information left out? Some of it could be left out, but for that guy on that ship, and he could be an individual CO, or a commander of a battle force, that information is what he needs right then and there. He has told them what he needs. He has told them what he wants. Now, there may be a follow-up picture or a follow-up message that will amplify but at least the initial picture gives him the type of information he needs to carry out his function. It could be in the form of a warning

that says, "Hey, this is in a form of warning, you may have to go and look at some other picture or get some additional information, but at least we're telling you this is what it is." It's a step in the process to alerting him.

Oettinger: Also as compared to what? I mean, it's like the argument over idiot lights in your cars. A fancy gauge will give you a good deal more information, but if the person looking at it can't read it or fathom it, then a red light that says "no oil" may be better than an oil gauge that is ignored. A few years ago we had Congressman Charley Rose here and he teed off against the use of comic books for training troops in Germany. One of the members of the class jumped down his throat: "What are you trying to do? I've got guys out there who can't read anything else, and these are damn good training aids. Sorry about that, but that's what I've got to work with and don't take away my comic books! I'm going to be worse off."

Student: I agree that putting something on videotape that used to be on a mapboard is a logical advantage and you can move things around. My concern is that when you start talking policies or potential information that deals with policy there are some things that really don't lend themselves to a visual format. I recall hearing once that the CIA, for example, wanted to do biographical profiles on people. Where before they were very psychological, in-depth studies, and they were probably summarized on one page, now they did a visual profile of an individual and it showed him giving speeches and little arrows into his head and what ideas were coming out. Supposedly that was a better way of doing it. A lot of people considered that possibly not always the best way, because you may be leaving something out. You may not get the real nuance.

Demech: I'm not saying that that's the only thing you're going to have, but that's one of the alerting mechanisms or one of the things that's going to stimulate someone. Again, a man who doesn't have an awful lot of time has more time to look; to use his eyes. He can immediately relate then instead of reading something. Show him a map of a place. Again, Richard Beal mentions they didn't know where an oasis was in Chad when the war first started in Chad. If they could have flashed a map and shown the President where that was, that would have meant a lot more to him than reading the coordinates, or something like that. You run the risk of not having all that information, but again, you have

to tailor it to the individual and to the circumstances. I don't see anything wrong with that. If that were the only thing, if that was the only vehicle available, of course, you would leave out things. It's up to the system and the design of the system that was built by individuals who listened to what the requirements were in the first place, what the man wanted. Afterwards you educate them, and that means the top person. I don't mean the President has to be the person who writes out the requirement, but at least educate him as to what you can or cannot do.

I remember that controversy over the profiles of individuals. We viewed a couple. It was like night and day. For people who like to read and have time to read, the heck with the video, the background information was much more useful. For the person who doesn't have time, the video is what he wants and that's what he's going to get. Don't forget, the other information is still available. Again, Tony brought up the fact that you can't depend on the President or expect the President to do everything. But he has his staff who's there to do those things. Obviously, it was his staff who got a few minutes with the President to make recommendations. When the man said, "Well, tell me what you're doing, or show me," that's when they wheeled up this picture, or some type of information that was based on high tech, because it was available. Then you can bring up the supporting data.

McLaughlin: I just wanted to comment on the past few comments. Having spent a long time myself in hierarchical organizations, it became clear after a while that there is a funny sense of expertise, if you will. For any person in any given position, he and people above him are policymakers, people below them are technicians. That can be whether you're talking about the President, or the Secretary of State, and it continues all the way down the chain. All the technicians, or the specialists, the expert staff people, are always dismayed about how little the boss really knows. Of course: The boss may be worrying about the whole world and you're worried about Malaysia, or something like that. I think that's a constant problem. There's no solution, but you have to be aware of it.

I think the other part of it is that that particular mentality works back to your first comment about the intelligence agencies being dismayed, perhaps, that they're being short-circuited by this. You haven't gotten any consensus of the intelligence community on a particular set of events. I would simply compare that to some of the stuff I see going

on in the outside corporate world today. It's not remote from all those newspaper stories you see about the XYZ corporation having laid off 40 percent of their staff in the last year. In an awful lot of these cases the world does not wait for the expert staff to come to a conclusion. The boss has to make a decision, and he can't wait three months for a resolution without a footnote. An awful lot of companies have looked around at a lot of those internal information or intelligence functions and they say, "Christ, they produce the stuff three months after the event. Let's get rid of them." That's happening throughout the corporate world, and I don't know if there are lessons there for some of the governmental functions as well. An awful lot of this stuff just comes to a decisionmaker long after it's of any value whatsoever. Can you afford it?

Demech: Exactly. The National Intelligence Estimates — how many were done? How fast? On what subjects? Well, Mr. Casey prided himself on having tripled the number of estimates that were produced when he was the DCI. A lot of people said, "This is great!" They had them, and they were shorter, they allowed for other views, dissenting views. Then the critics came in and said, "You can't be very good because you're doing them too fast." (Just what you were saying.) Whom was he going to satisfy? He made a decision that they would go ahead and produce them in a certain amount of time.

Dave McManis talked about it when he was here. There was another problem for the National Intelligence Officer for Warning. How quickly are you going to warn somebody that "Something's happening," "Somebody is coming," or, "This is in the form of an alert." Are you going to do it on a little bit of information, a lot of information? Are you going to wait until you have the full bag and it's too late? That's part of the problem.

Oettinger: I think there's a crucial point being made here. It's something we ought to distill and try to nail it if you want. It's inevitable. It happens at every level. The surprise always is that why does it happen at the CEO level or the presidential level, because all that staff and etc., etc., ought to be able to do it better. These conditions do not change. The rapidity of events has nothing to do with the size of staff of this organization or another. You can talk about the whole United States, or the whole Soviet Union, or the whole world. You can have a rinky-dink, small organization, and the problem is the same. You can't get much smaller than our little research organization, and I'm in Dutch with some

of our staff, because acting on a quick intelligence report, mainly the release by IBM of some new PCs, I bypassed my staff, one of my part-time students and his recommendation, several months in the making. I ordered a couple of computers by way of stashing some stuff away against the eventuality that this new announcement meant that maybe some of our spare parts sources would dry up, etc., etc.

It may be years before I'll know whether I was right or wrong. I was chuckling to myself as this was happening, because I was thinking about some of the things we deal with in this course, and I was taking the same flak that anybody would in organizations 100,000 times the size of our five-person shop.

Student: As a decisionmaker, that's your prerogative, and I guess that's what it all comes down to. Decisionmakers have to realize that once they make that kind of a decision, based perhaps on spotty information, they must be willing to stand by it later on, and not blame the intelligence community, or blame somebody else for a failure.

Demech: You've hit it right on the nose, and it's part of this education process that I'm getting to, also. I think we've started to get to the people — the decisionmakers — who need to know that this intelligence, this information gathering, this knowledge, can help them. That's what I was trying to convey. We finally have something in writing for this country that says what our national strategy is. Whether it's right or wrong, it was put out because the Congress forced the President of the United States to put it out. They passed a law. In here is a comment on intelligence. It's very simple and it's nothing big. It says, "The development and execution of a sound national security strategy requires effective intelligence. Capabilities provide thorough and accurate appreciations of actual or potential threats to our national security. Our deterrent strategy relies heavily on reliable intelligence concerning potential adversaries, strategies, forces, doctrines."

The education process has started. They're starting to get that information so that people will understand it. I'm not saying that this is the end, or this is *the* solution. This is the beginning. The other thing is I've been around long enough, a lot longer than you. We go around in circles. We do things, we change, then we come back. Where should the intelligence processing or diffusion take place? When I first came into the business 24 years ago as a very young officer, we did everything out in the field. Ships had the authority to do processing and to issue products, to issue finished reports. Then for a vari-

ety of reasons, I think mostly centered around the Vietnam War, our resources were going to Vietnam, and then after the Vietnam War we had the drawdown, and we changed. Everything was sent back to the United States or to a central facility for processing. Now, we've changed it. We're sending it all out for a number of reasons.

For example; single point, vulnerability. What happens when a guy drives up with a satchel charge and wipes out a portion of the Pentagon or NSA? I mean, you're out of business, and that can happen with a terrorist threat. So, now we're going to push it out. More problems. The prerogatives. Who has access to databases? Who is going to have the authority to make decisions? Are you going to corrupt databases? Security? Some people say by distributing the databases you enhance security, reduce your vulnerability. Other people say, "The more people that will have access, the more potential you have for espionage." You're never going to satisfy everyone. But, we've come that complete circle. Some Presidents will probably never use video or want those types of pictures. Others will. But why not take advantage of what's available today? We had Rich Beal in 1981 with a pencil as his tool, when around the world other countries are spending fortunes to gain access to information that you and I can buy in the store. It was obscene not to have that available to the center of our government, and why not take advantage of that?

Student: What is the current status of Beal's center?

Demech: The center is still open, but under tight control, until they see what happens as a result of the investigations that are going on. That's where all the information was available that they got so far on what took place. Memos were written and they were stored in a database. The Tower Commission had to have a certain individual who could break the code to get into it to find out what it held, but it was there.

Oettinger: Who has seen the latest issue of the *Kennedy School Update*? It was pointed out with pride that the guy who got in was a Kennedy School MPP graduate.

Demech: Well, yes, that's right. I talked to General Scowcroft and some of the people who helped write the report and it was just amazing that they were able to get in and get that information. Without it their report would be nothing.

We're talking about machines. I'm a great believer in machines. I was involved in a system for

sending pictures to sea. By the way, that was done by a Hewlett-Packard computer, off the shelf, with a very simple software program, again, commercially available. We did it. The whole thing cost less than \$100,000. We took great pride in that, but it seems to me that something as interesting and as important as that should have been done by "The System" so that you could take advantage of it and have interoperability with all of the services. All the services could use it because it was off the shelf. Why don't we do that more frequently?

McLaughlin: Because it was NIH: "not invented here."

Demech: That's right. NASA has this tremendous video display unit and people weren't taking advantage of that. That's one of my criticisms of the process that we have. They wanted to take six years. We did this thing in a couple of months. The computers and all these fantastic tools are able to follow every type of sensor that you have, and alert different sensors, and key them, depending on where the activity is, no matter what the subject is. It could be military, it could be economic, it could be any kind of a subject. You have the tools available to tell you what to do, or at least alert you where to go for information. And, again, you could do it with colors.

I like the topic of jelly beans. I like jelly beans. All the different colors. You could design a system centered around colors. You can send a message that the person can read, or scan, just by looking at colors; "This is in the form of alert; this is active; this is hot; this is cold; here's where you should go, and maybe check with the Commerce Department, or Treasury, or somebody else. Money is moving here; semiconductors are being dropped here, unloaded." At least alert them.

Now, I've mentioned a lot about machines. The human being is still the key, and that's never going to change. That's one of the biggest problems in this business: Where to find the people; how to keep them; how to train them. Where are you going to find the people who know every dialect of Arabic? You need to listen to a Libyan, or the conversations of Libyans, for fighting the terrorists. Who understands what a Libyan is saying? Because only a Libyan can understand Libyans when they speak a certain type of dialect. Or somebody from Yemen, or somebody with knowledge of the different Arabic dialects. You have to find that person, keep him, and train him.

What is the incentive for a person to stay in the business? In my experience a linguist becomes best when he or she's more senior and has long years of

experience. In the past, the system forced them to get out of that business and become managers, or they couldn't get promoted. That is changing slowly but surely. We need to give them the option of being linguists, or being analysts and staying there; having a viable career; reaching promotion to high grades. That is what's happening. It's not 100 percent implemented, but it is happening. Admiral Inman when he was out at NSA gave people extra money, bonuses, if they had two languages, and again, gave them the incentive.

Another thing that's happened is using what's available on the outside world. If you have an estimate, and it's really not that sensitive, why not give it to a businessman or another organization, or at least bring them in to see what you have said, to see what you have come up with, to try to make sure that you haven't missed anything. Take advantage of the outside sources.

One thing the intelligence community has done, and by the way, we have a long way to go, is look at corporations that have been successful. They all read the book, *In Search of Excellence*, and they say, "What has made this X corporation, or Y corporation, successful?" They try to adapt those things; the tiger teams, the initiative. Trying to get the people who can react in a crisis situation. Getting the young people into jobs that are important. Bob Gates, who's the Deputy DCI, and who was going to be DCI until that unfortunate incident, is 43 years old and a product of the system. Why not have a young man, or lady, go and brief the President? Not all the time, but at least going to brief the President. They're starting to say, "Hey, this is good. This is what we're going to do." Maybe this type of incentive will allow us to retain these individuals.

Getting the information from point Y to point Z. A lot of the things, sending pictures to sea, sending pictures to a tactical unit, or getting information distributed inside the White House. It all depends on communications, and by God we have some fantastic systems: high data rates, sophisticated.

When I first started in the business, communications were less than 100 percent reliable. We depended on troposcatter systems, and it was just horrific. Today we have all these great systems. Is that the answer? Again, I think it helps tremendously, but let me tell you some of the problems which exist today. You don't uncover these until you're part of it. There are certain key installations in the defense establishment that depend on the telephone systems of host countries to pass messages.

Messages that say "launch your weapons." Or messages that are in the form of an alert to a unit that says you'd better look out because you're in jeopardy. That is a startling revelation. That is incredible. Once these things are uncovered people start to do something about them, but it's not easy.

Then you go to satellite communications to offset that; systems where you have control of your own satellite terminals in your back yard. What about the vulnerability of the satellite itself? So when Donald Latham comes and says we're going to harden the satellites and make them more survivable because they can move and do other things, then you say, "How much does it cost to launch one of those?" It's \$100,000 per pound, and you keep adding, and these are some of the problems. But they have to do them to try to have a survivable system.

Will the information be available in time of conflict or war? A problem all the time. Or in business at the time of all these takeovers and stuff like that, are you going to have the information available? I don't know if you will, but a lot of people are trying to do their best to make sure that information is available. Again, not an easy situation and we don't learn well from previous mistakes.

In the 1960s, the Sixth Fleet Commander, Admiral Kidd in the Mediterranean, used to die for information. The system was clogged up. He couldn't get information. Then every day he used to see this plane flying over the Mediterranean. It was an Air Force reconnaissance plane. It used to dip its wings to him. That plane had all the information he needed. They couldn't talk. Simple solution and a couple of young officers got medals. They put a compatible communications system on the plane and the ship. They solved it. The people thought they were heroes. Twenty years later, the same problem. A different part of the world: Air Force planes flying over a Navy ship. They can't talk to each other. You fix it by doing the same thing that was done 20 years ago. We sometimes just don't learn our lessons about communications problems.

One other thing. I remember an exercise conducted by a potential adversary. They must have known something, I think. They didn't practice any emission control. All their emitters were on. Obviously, our system collected all that surge in information. They sent it to the intermediate nodes to be processed and then forwarded on to Washington. So much information was passed that the intermediate nodes shut down. The computers couldn't handle it. You're talking about 2400 baud circuits and things like that, and the information was stuck because

they couldn't get it through. It took days to get it to Washington. A big problem. A lot of people were concerned. How do you fix that information? How do you deal with it? Almost as if the adversary knew that we couldn't handle that information, and did it to test it.

Being in the business, knowing a little bit about the Walker espionage case and some other espionage cases, who knows, maybe they knew we couldn't handle it and did it on purpose to test the system. I don't know if that is really the case, but it could be.

Oettinger: There was a wonderful picture in *The Boston Globe* the other day of Gennaro Angiulo, who is now sitting some time for being the Mafia leader around here, waving at the prosecutor's hidden camera. He was under surveillance. That sort of thing happens, at least in Boston it happens that way.

Demech: To find out if we can deal with wartime situations, people try to do some very sophisticated exercises. Every time you do an exercise you give up something. They exercise, we exercise. Somebody's going to pick up some type of information that could add to their information bank, or the background information on how you conduct operations. If the CEO of a company runs down to some portion of the company and says "Give me that type of information immediately," or he just walks in, people get nervous. The same thing happens with admirals and generals. People then make mistakes when that's happening. Exercises are both good and bad.

Then people say you can't conduct a realistic exercise. Well, all you have to do is send a combined U.S./NATO task force off Norway if you want to see a realistic situation, and if the Russians think you're coming and they want to defend the homeland, you get a pretty realistic environment. The Navy's maritime strategy is to put everybody out forward, and that's obviously what the other people are reading.

McLaughlin: Mr. Lehman* was for disinformation?

Demech: I won't get into that. I just did a research paper on Soviet active measures that includes disinformation. That's another subject that we can go on and on about. We talk about a lot of things in this business, and we talk about people and human judgments. CEOs need accurate economic informa-

tion; Presidents need accurate information on the political situation. I guess company managers need that, too.

How do you deal with what's in a human being's mind? What I'm getting to is intentions. How do you deal with the intention? How do you deal with the political situation? The toughest nut to crack, one of the ones we're dealing with now because of terrorism. Obviously it would be great to have somebody on the Central Committee of the Soviet Union or some other adversary, but that doesn't happen all the time. How do you deal with the four-person family-oriented terrorist group in Lebanon who's holding a hostage? The name of the game is humans, again, and human intelligence.

People have said that we have put so much money into technical means, but forgotten about the humans — both those humans who have to analyze information, help process it, interpret it, put it together, and the people who have to go out and gather that type of information. A lot of effort gets put into that. But where do you find the individual who can deal with — I don't like to use the term, but I will — a "slime bag" in Beirut, a city that's in anarchy and people carry guns. You show up to meet someone with your little popgun, and he shows up with 10 people with Uzi machine guns. How do you penetrate that to find out where that information is and how difficult that is? Where do you gather that information? It's not an easy thing, but a lot of people are trying very, very hard.

Given our country's thoughts about those things, they don't like to hear about that, and they don't like to think that people do that, but that's a necessary evil. It's also one of the areas where you can gain a lot of information from overt sources. The community has been criticized, and I've mentioned this before, for not picking up information that is available from open sources.

When you send a person to serve in one of our embassies overseas who doesn't speak the language of the country that he or she is serving in, you miss a lot. I don't care who it is, that happens. The easiest thing to do is to read newspapers and publications, and not to understand an individual's own language in the country they're serving is a pretty sad state of affairs. That does happen all the time.

Leaks, and security, and espionage. There are leaks and there are leaks. There's information that's made available on purpose. The KAL-007 shoot-down, when people went on the air and said, "We have tapes that prove that the Soviets shot down that airliner." Intelligence, to be useful, has to be used,

*Secretary of the Navy John Lehman.

but when do you make the decision on how to use it? Do you give up sources and methods? Do you affect that fragile nature of the intelligence? How does that then affect what you're going to do with the command and control of your forces, or the type of action you're contemplating? I'm not familiar with this, but I can just surmise that the information on semiconductor dumping by the Japanese had to come from someplace. It could have been overt; it could have been just from Commerce; it could have been from the economic advisor in an embassy someplace. That information was picked up, and then it was used by going into sanctions against Japan.

The *Achille Lauro*. We used that information to go after those people. The disco bombing in Germany. One person killed as opposed to a lot of other people killed, and we made an attack on Libya based on intelligence information that was made available. The fragile nature of intelligence means some people are against using it. The Green Door: We used to hide behind the Green Door and say, "We can't divulge that information to you because you're not cleared, or you don't have access to that information." Thank God Admiral Inman was a great mover, and he was the catalyst behind downgrading information, where you can send the information out at a very low classification, at a very low level, and have it useful. Consumers don't know where that information is coming from. There's nothing wrong with that. He was great in doing that, and I think that's happened, not only throughout the Defense Department, but also in businesses around the world.

Oettinger: Although I think the tide of paranoia has been rising.

Demech: It may change again because of all of the espionage cases. But I know for a fact that you can send out short, alerting information to a unit, and have it just at a confidential level, and that's of use to that person and he or she doesn't have to know where that's coming from.

In all the espionage cases, the Walkers and others where the security loss was great, all the signals about what they were doing were there. I think it's our society. People don't like to think that other people are going to do that. People don't like to look over the shoulders of their coworkers. The Walker case, again, from the little I know from the unclassified stories and unclassified information, shows all the indicators were there — the change in lifestyle, money, vacations — and the people who worked around them knew and recognized it, but

didn't do anything about it. More people are aware of that today. Are they going to do anything about it? Who's blowing the whistle on inside traders? Obviously, somebody is, and, again, it's not an easy thing to do. It's very difficult to do something against one of your fellow workers, or a human being.

For those people who are selling secrets and getting involved, they're no different than anybody else. They have vulnerabilities, and to blame young Marines, single Marines, saying we shouldn't send them to places like Moscow, is unfair. Well, who's saying that a married person is not going to be tempted the same way? I'm not saying that's the biggest problem. I think, being a little older than some of the people here, that the value system has changed a little bit in the country. Maybe young people don't know the difference between right and wrong when money is the common denominator.

Security at embassies, and why the State Department resists. Again, I have some familiarity with it, because you may have read in the paper that PFIAB, the President's Foreign Intelligence Advisory Board, is involved in that. I think, again, the people in the State Department are trying to enhance relationships with countries and governments, and the type of information that's made available to them — maybe they are aware of it already, or they take the information on board. The place is potentially bugged, or potentially you're going to divulge classified information, or intelligence information is going to be divulged, but maybe they can offset it by doing something else, or they're going to take that into consideration and still carry out their business by saying, like Ambassador Hartman, "I just want them to know that we're trying to play it straight." It's a two-edged sword. I don't know what the answer is.

Obviously, a lot has been in the press, and you don't know what the damage assessment is yet. But, as the British would say, "It's horrific." Again, that information was available. Reports were made available. The State Department had them. As the Secretary said yesterday, "The buck stops now. I'm responsible. We didn't do our job." Why people don't? I don't know. The same thing happens in business when they have information that somebody is doing something of a potential threat to them. Companies are successful, and companies go out of business because they don't take advantage of the information that is made available to them.

McLaughlin: Before you go on, can I back up for a moment? The NSA case just this past year, Pel-

ton. When I went to work in Washington a quarter of a century ago, and first got exposed to clearances and things like that, I can remember being told then that divorce, money problems, and drinking problems were automatic triggers for the security people. If somebody called the office to find out about attaching salaries, that was something that was to be reported to the security people immediately. So here we have a guy who has known, identified, drinking and drug problems. He files personal bankruptcy, gets divorced, is going around with a younger woman, or whatever. Where were the security people?

Student: They were catching guys like me walking out of the building with a vugraph in my briefcase, an unclassified vugraph, and hauling me down to their security offices, because I didn't have a pass to bring it into the building in the first place. That's one place they are. There's a lot of emphasis on physical security, not enough on electromagnetic security. There's not enough on personnel security. Those rules are all in the books, but they aren't enforced for many of the very human reasons that you talked about. It's the supervisor's responsibility.

Demech: Right now, in the Navy, Secretary Lehman, once something happens, takes the bull by the horns. In the Navy, today, each person who's in the chain of command, or has responsibility over an individual, has to certify twice a year that that individual is trustworthy and can hold a security clearance. This extends from the commanding officer down to an enlisted rank that's equivalent to an E-5, down to a very low rank. That means that that individual's own career is in jeopardy if they certify somebody and they're not sure or something bad happens. Obviously, sometimes you won't know. But you're supposed to find out if that person is buying a Porsche, and he's only making \$12,000 a year, and by the way, he's also gone to France for a two-week vacation, and he's bought a yacht. If those signals are there, you're going to say to someone, "We'd better check this guy out by various methods," still respecting his rights under the Constitution. But, now, each person is accountable for his or her brother, so to speak. That's a step in one direction. But that asks a lot from people; that's not our nature. We're not trying to do that, but when your job is at stake, when your pay is at stake, and when your future's at stake, and maybe in the long run, your country's at stake, well, people are going to perhaps view this a little differently.

Once a person is granted a clearance, or has access to a program, you want to think that this per-

son has enough integrity that he or she is going to carry out their job and not be a bad person. The value system is changing. The common denominator in all these cases was not ideology, it was money. Also, there was sex, but it was money primarily, and that's the key.

Student: Apparently not large amounts.

Demech: Not large amounts, but to the individual it was enough. To a Marine, a couple of thousand dollars is a lot. To Walker, evidently it was a lot, relatively speaking to him. You're talking about, maybe, a couple of hundred thousand dollars. To some people that's a lot of money. But, you're right, it's not.

Student: It's getting it cheap.

Demech: It's getting too cheap. It's an unrelenting offensive against people. It's not an easily solved problem. They say the polygraph is very intrusive and it will not solve a problem, and a polygraph can be beat. I agree, but the fact that you are going to be polygraphed, or you're going to have the possibility at any time to be polygraphed, may just alert you. When some people walk in a room the polygraph starts chattering right away. You've got to watch that, but that's one tool in the whole process, and I think it can be used, again, protecting the rights of the individual. Will it happen to all the people? No. But in the Defense Department, for those key, sensitive jobs that have been identified, if the individuals know before they go into that job that the polygraph is going to be part of their security clearance, or their security check, then for those individuals, by accepting the job, that's tantamount to saying they accept being polygraphed.

There's one other thing I want to say about human judgment. I think there's only one area that I know of where human judgment will not come into play. It's an area that's of concern to people, and that's SDI. I think with the massive amounts of data, terrain masking, artificial intelligence, the whole nine yards, the human being will not have enough time to make a judgment on SDI and that we're going to have to depend on machines to make those judgments. That makes a lot of people apprehensive, nervous, but until we get the most powerful computer up to the speed of our brain, I think that's one area where human judgment will not come into play. Tony, you're an expert in that area.

Oettinger: I'm not sure it's a matter of principle so much as a matter of degree. I worry about the SDI thing mainly because I think it's so far beyond anything that is within reach now; that it's a bit

dreamy. But on the other hand, I happily ride an airliner which, except for a bit at takeoff and a bit at landing, is essentially totally under machine control. I remember just a couple of months ago I was on a private plane. You don't get the thrill these days on commercial airliners because of the whole damn security. I was sitting in a jump seat in this private thing chatting with the pilot and the copilot, and the damn thing took this sharp bank to the left, and I nearly jumped out of my skin. They just kept on chatting. The inertial navigation system knew where they were, and it was time to make a left turn.

It's not a matter of principle. It's every day now. There's no damn bit of human judgment in there. The pilot might be up there fooling around with the stewardess.

Demech: I agree, but because SDI is such a subject of interest to everyone that's the only reason I mention that.

One other thing about secrecy. It's funny, but in a society where we pride ourselves on having no secrets and being open, the American people don't protest the clergy, doctors, lawyers, income tax returns; things like that where a great deal of secrecy is maintained by those individuals, by the doctors and by ministers and priests when they hear confession. But that's an interesting comparison.

Arms control and arms control verification. We haven't talked about that. It's an interesting subject. Can intelligence provide the satisfactory degree of confidence that people will need to verify any type of arms control agreement? You hear a lot about national, technical means of verification, and everyone depends on very sophisticated systems. They say we don't need anything else. Well, it seems that everybody's starting to come around to onsite verification, including the Soviets. I don't know if they're really sincere about that. They have some very sharp people. It's going to be very difficult, for instance, if we both agree to onsite verification, for the Soviets to be allowed to go into a company like DuPont in Wilmington who don't have anything to do with the system, but the Soviets demand it because they think there's something going on in that plant. The U.S. Constitution and laws prevent that from happening. How are you going to deal with that? I don't think it will ever come to that, but I think that's where they're coming from.

Can you imagine trying to get from one point to another in the Soviet Union, with their modes of transportation, and their flights and lack thereof, or railroads, and trying to get to someplace out in the boondocks to try to verify whether or not they've

done something in a timely manner? Or are you going to paint the missiles orange and say, "This one does not contain a nuclear warhead, and this one does, or this thing had 10 warheads and now it only has six." The biggest problem is going to be verification of drawdown on any arms control agreement. The intelligence community is being asked more and more to provide the magical answers. As I mentioned in the beginning, it's not magic and it's not a permanent fix, but it's going to be called upon to do more and more. It's going to stress the system.

For instance, there are certain systems that don't see through clouds, and there are parts of the Soviet Union where there are clouds all the time. I mean, the Soviets were able to build that big radar. It was under construction for two and a half years before anybody found out because the sensor was not pointed there, because we didn't think anything was going on there, and it's under cloud 85 percent of the time. I think technology will help us a great deal in the future. You're talking about phased-array systems up in space. You're talking about a lot of cheap satellites to replace older satellites. All this depends on having a vehicle to get it up there these days. You're talking about photonic instead of electronic things; substituting light for electronic devices to defeat EMP (electromagnetic pulse) and stuff like that. I think all those things will help, but whether or not you'll ever have 100 percent verification based on intelligence is a question that remains to be answered. I don't know if anyone has any comments on that, but that's a very difficult subject.

How is intelligence going to support those low intensity conflicts, or those things that are happening, those insurgencies, those potential hot spots throughout the world? Here, again, is the intelligence community going to be able to cover all the parts of the world, and cover all the subjects that we're now being asked to? How much is enough? Are you going to be able to cover the southern part of Latin America? Are you going to have the expertise to cover all the countries in Central America? And, what about that big country on our border, Mexico? It now looks like Mexico City is one of the hotbeds of intelligence gathering. Are you going to be able to cover all those things?

If a low intensity conflict does arise, what type of intelligence does a tactical commander need to conduct that operation? Hopefully, you'll have information that's out in the front, that's giving him data as the situation is developing. We solve one problem,

and create another. We get people more interested in details other than military, and then they want more and more. As Rich Beal said, he was trying to cover all parts of the world, and maintaining a database on all parts of the world. When I first came into the business we actually did that, because we weren't talking about sophisticated means, but we had a lot of people, money, and power.

The intelligence community in the last six years has enjoyed a lot of luxury in the budget by getting more people, and more money to do things, but I don't know where it's going to end, or when it's going to start to stop. Maybe by next year. That's a question that has to be answered to develop those systems that can cover all parts of the world and all subjects: the Falklands, Chile, and Argentina. You're talking about some of those islands out in the South Pacific that are now granting access to the Soviets for fishing, and people are starting to get interested in places that you don't even know how to spell, or you don't even know anything about. People want more and more information on that.

McLaughlin: Vanuatu?

Demech: Yes, that's one that's recent. They signed the agreement with the Soviets. They kicked them out, then they go back; back and forth. I don't know what the answer on that one is.

Tactical commanders. The people at the low level need information that's a little different from what the President or the top executive gets. More and more emphasis is being put on developing systems to support that individual. You're now actually having fusion systems, systems that can bring all different types of information together right on the battlefield. If you don't think so, all you have to do is read this report to Congress.* There's about eight pages in here now. It's an unclassified publication on command, control, communications, and intelligence, and a lot is devoted to systems that are being developed especially for the tactical commander. Included in another one is the military posture prepared by the JCS.** They have enough acronyms and abbreviations to work your mind over. I won't go through a lot of those. They're available, but these two documents will show how much emphasis is being put on satisfying the needs of the tactical commander.

**Annual Report to the Congress, FY 1988.* Caspar W. Weinberger, Secretary of Defense.

***United States Military Posture, FY 1988.* Prepared by the Joint Staff of the Joint Chiefs of Staff.

Since I came into this business, there's always been that problem: Who owns the system? Who controls it? And then, by the way, if you're going to have everything rising to the top, what about the guys out in the field, who have always been suspicious of the people back in Washington processing all that information and having it flow all over the place, and forgetting the guy who's sitting out in the middle of nowhere. I think a lot of people are starting to change their ideas about that.

Student: Does that address distribution of information to allies?

Demech: Yes, and that's a problem. NATO allies are obviously one of the areas that's mentioned. Interoperability, security concerns, and systems are being designed specifically for use with allies so that we do have the interoperability. A lot of the exercises that are being conducted now that I'm familiar with in the NATO area, for instance, do have systems with compatibility. In fact, at a number of bases now in Europe you do have NATO people inputting right there, serving right there next to U.S. personnel.

War fighting and then war termination. God forbid we ever get in a conflict. What happens to the intelligence to end the war? Is that intelligence going to be available? What type of information are you going to need to end the war? It's a question that's starting to be asked by people today. It's one that they don't like to address because it's foreign, it's nasty. Damage assessment, bomb value damage assessment. What's available in the way of infrastructure for society if you've had nuclear attacks, or if you've had conventional attacks to wipe out the system? How do you ensure that what has been agreed to is happening? How do you ensure that the people are pulling back, when perhaps your systems have been destroyed or immobilized? That's a question that has to be addressed. And, again, it's the intelligence community that's being asked to deliver.

Grenada was an interesting experience. We talked a little bit about that at lunch. Were maps available? Why didn't we have more information when tourists could get there? Have we learned anything from Grenada? I think people have. We now have a generic plan, called a generic C³ plan, and all you have to do is fill in the blanks. I don't know if that's good, but all you have to do is fill in where you're headed, what you want, and it could be any part of the world. That's based on the lessons we learned from Grenada.

McLaughlin: This is a nuisance almost, but there were standard forms for writing orders before Grenada, too. Somebody says "We'll simply get the codes coordinated." It's usually appendix K of operational orders. There was a form for doing that before Grenada, and I'm not sure that having a generic plan isn't misleading.

Demech: It makes people feel good. They've had a recent example where the real world situation proved that they had some problems. As we discussed earlier, the biggest problem we had was the secrecy problem. Too much secrecy prevented the effective use of command, and control, and intelligence. Having that plan now is what they advertise as one of the lessons that they've learned. I'm not saying that's right, but at least they have something that they didn't have then. Maybe they should have dusted off what was available before and used it. We sometimes learn from past mistakes, and sometimes we don't.

As technology increases, and expands, and we get more and more into the world of the almost unbelievable, how does the intelligence community deal with that? How does the intelligence community deal with things like spread spectrum, and frequency hopping? The intelligence community is being asked to deal with narcotics, and narco terrorism. You know they have a radio that's called the Drug Runner's Special. It's a very sophisticated radio that's sold by any commercial company. It's frequency hopping, and the police have a hard time keeping track of them in south Florida because of this sophisticated device. Now people are buying them and putting them in labs, and trying to work against them, because lo and behold potential adversaries have bought a whole lot of these pieces of equipment.

One of the finest pieces of equipment is built in Britain, and it's called the Jaguar. It's available for a relatively small amount of money, and people have them in their vehicles. They're incredible devices; frequency-hopping CBs, basically, but they hop frequencies so fast that you can't go against them. When you're at spread spectrum (I'm not an engineer) you're almost into white noise and you can hide things. How do you deal with those types of communication systems? How do you go after them?

How do you go after U.S. systems, or friendly systems? The Soviets have commercial radars, commercial equipment built in the West, on a lot of their vessels, and their ships, and their airplanes.

Does the United States build equipment to go after their own equipment? How do you deal with that? How do you deal with a country like Iran that had all U.S. equipment and then became an adversary? The intelligence community is going to be called upon to provide the answers. A lot of money is going into R&D to try to deal with those types of circumstances.

McLaughlin: Or the British Navy facing French missiles in the Falklands?

Demech: That's right. The weapons systems today are so accurate, so mobile, so lethal, and engage a distant enemy in such a short period of time. There's where your picture, perhaps, there's where your alerting message has to play a key role and perhaps means survival. Both countries, when you talk about the Soviet Union and the United States, are building platforms that have these cruise missiles that are multiplying the threat by x number of degrees, and how are you going to deal with that type of threat? I don't want to get into some of the other things you read about in the newspapers, but the stealthy problem only magnifies the problem. You talk about intelligence trying to find things that are hidden. You know as well as I do that we'll have a secret for so long, and then that won't be a secret, and people are going to get that information. You're talking about things that are going to become invisible, and that you're going to have to deal with. The intelligence community is going to have to deal with another problem.

Intelligence is supposed to be a stability for surprise. It's supposed to prevent surprise. Can it prevent surprise? It has in the past. Will it be available to do it in the future? I don't know.

Student: What's happened in the past? I haven't had too many examples of that.

Demech: There have been examples during the Second World War, and there are other examples that you don't know about because of the successes we don't hear about. We only hear about the failures. It has prevented surprise, believe me, it has. Judge Webster and the Vice President take great pride in the fact that intelligence has prevented 100 serious terrorist incidents in the United States in the last year. They just publicized that information. You don't see that too often on the front page or anything like that. I think that's an example where it has worked.

Oettinger: The publicity is all on Pearl Harbor, but if you look at the history of most of the rest of World War II, it's a different story.

Demech: It's not perfect, obviously. A lot of people are critical of the United States, and how we can't deal with terrorists. They look at Germany and some of these other countries and how they deal with terrorism. Well, they have great successes, but that's where most of the terrorist attacks are taking place. The United States is a little more difficult, but I think one of the reasons why it's difficult is because we do have some pretty good intelligence, coupled with other things. Can you imagine a Middle Eastern Arab coming to New York City and trying to go through Customs at about 10 o'clock at night and meeting up with some New York inspector who wants to get off work? If you've ever seen that person dealing with us, can you imagine the type of reaction a Middle Easterner is going to get in trying to deal with Customs? They ask the wrong questions or something like that, and they're not treated very well. That's one of the best defenses that we have.

Oettinger: A marvelous random system: a surly Customs guy.

Demech: That's right, but again, we are back into using intelligence to offset a problem. Are you going to divulge your sources and methods by using that intelligence?

I think that's about all I have. I can go into some of my experience on the PFIAB and any questions you may have in relationship to some of the things that are going on in the papers or anything like that.

Student: What's the story on the current flap about embassy security?

Demech: The report on security at the Moscow Embassy was raised first, not in 1985, but in 1983. It was all there. This was in the form of an alert. Anytime you have 200 Soviet citizens in your embassy the potential exists. They may not even be involved in planting bugs, but they are a threat just by being able to keep track of who comes and goes, what their schedule is, what time they arrive at work. Just the fact that you had to go through these people to get tickets to the ballet, or to get permission to travel past the outer ring road out to the recreational facility, just the fact that everything you did was controlled by someone else who had the potential of being an enemy agent, was enough to make people concerned. Why the State Department did not agree to that, or accept that report, I don't know. Again, their primary job is to have good, cordial relations with countries. I'm not saying that's an excuse. I'm one of their harshest critics. But that's one of the things that happened.

Mr. Perot,* indeed, was involved. He didn't quit PFIAB because of that. One of the problems, they said, in replacing the Soviets was to try to get Americans there who could be trained to be janitors, who understood the language, and who were willing to live under those conditions. Those conditions are very harsh. In the winter the hot water is mysteriously shut off for weeks and sometimes months at a time. The recreational facility that you have is on one of the most polluted rivers in the world. If you threw a match in it, it would be like the river in Ohio, it would catch on fire, as opposed to what's available in this country for support people.

Mr. Perot said he'd be willing to give some of his money, as the patriot he is, to help train those people and to give them bonuses just to go there to prove that it can be done. That was 1983. That's basically what's happening now when the United States took all the Soviets out and then the Soviets helped us by preventing their people from going back to work in the embassy.

There's a company in California that has the contract to provide support to our Moscow embassy. They've already had some problems themselves. They sent back nine people. A couple of people couldn't get clearances, but that's something that can be overcome. How long they can be sent there and be strong, stalwart individuals, I don't know. It's not an easy environment to live and work in.

Student: I recall when Reagan first came to office there was a big deal about quid pro quo in the diplomatic areas, and whatever favors were given to one embassy should have been given to others, in the area of personnel. The numbers on one side had to equal the other side. It came down to even the privileges of being able to go into the State Department through the back doors. That was a big thing for a while and then it died down. What was the reason for it dying down?

Demech: I think just a lack of concentrated effort by the individuals who want to enforce that. They have established within the State Department an office headed up by an ambassador that now insists, in fact it's the law, that foreign nationals have to go to his office to get license plates, or to rent places. In the United States, the Soviets and a lot of countries own property; they can't do that anymore. Reciprocity. If we can't own land in their countries, they can't own it in this country. A little bit of that

*H. Ross Perot, founder and former CEO of Electronic Data Systems Corporation.

is happening, but a lot got lost because people didn't want to enforce it.

One of the first lessons I learned was that when the President of the United States signs something, and you think that's what's directed and it's going to happen, it doesn't happen all the time, because you need the people down the line who are going to enforce it. You need individuals or organizations who are going to make sure that that does happen.

Student: It seemed it was in their own interest, in the State Department employees' interest, to want to push that. That was just so shocking to me.

Demech: It was shocking to you; it was shocking to a lot of us who started the ball rolling in that regard. Again, you have to serve as a Foreign Service Officer (FSO) to understand the mentality, and what they're dealing with, and how they think.

McLaughlin: The highest order for 95 percent of career FSOs and some of the people who hire them is conflict avoidance. Even if it's their own hot water being shut off, you can hardly force one to go complain to the Russians about it, never mind shutting off the Russians' hot water.

Demech: They don't believe in that.

McLaughlin: You do have communications back to Washington from Moscow. I think that one can get almost instantaneous symmetry of hot and cold water, and I think it would have some marvelous effects. A Foreign Service Officer will bitch and scream up the chain about how terrible these conditions of life are, but actually to complain to the Soviets about this goes against their grain.

Demech: There are a lot of people who would want reciprocity. One of the attaches and his wife were set upon by concerned Soviet citizens in Leningrad, roughed up, and strip-searched. That's outrageous. Now, could we get away with that in the United States? No way! We couldn't even try to do some things to harass them. Soviet embassy people have wound up at SAC. They're not supposed to be there. They've wound up at Fort Meade, Maryland, and they're not supposed to be there. They used to drive vans across the country. They'd bring vans to the West Coast and ship them to the East Coast so they wouldn't have to go around, and they wound up at strange places: Kalamazoo, Michigan, and places like that. We just don't do that. It's not our way.

Congress passed laws that said we will have reciprocity, and the State Department dragged their feet on those things until just now; until they made it so

outrageous that they said we'd have to have the same numbers. There are no Americans that get near the grounds of the Soviet Embassy in Washington, not even to cut the grass. Yet we had 200 and some Russians working in our embassy in Moscow. It was just incredible. You are right.

The President's Foreign Intelligence Advisory Board can be a vehicle to assist the President in making sure that he gets the information. He can use this board to get involved. And, again, it depends on the President. President Kennedy used them. He called them up at night. They'd go and talk about things. President Nixon used them, Doctor Baker, Doctor Land, and because of that board and those individuals, we now have a space program. It would not have happened as quickly as it did, or as efficiently as it did, if it wasn't for individuals on a board that can be used.

Oettinger: And that wasn't a part of the bureaucracy.

Demech: That's right. It was outside the bureaucracy, and that's what the President needs. President Ford used them. President Johnson did not use them, although he had them available. President Carter did away with the Board. President Reagan brought them back and we submitted something like 150 recommendations in the first three years after the Board was resurrected.

A lot of them were acted upon, a lot of them were not. We were covering the whole gamut from A to Z.

Bureaucracies sometimes just can't cope with change. You have to understand people and bureaucracies to know what intelligence command and control are all about. Again, the Tower Commission report: NSA's bias of security and protecting things; the FBI bias of, perhaps, doing a lot on counterintelligence. If you can come away with nothing else but those things, then you'll have understood the role of intelligence and command and control.

Student: What is the Foreign Intelligence Advisory Board?

Demech: It's a board of distinguished Americans from both parties who receive no pay, who are appointed by the President, who advise him on the quality and efficiency of the intelligence community and of the material that he's received. It's sort of a watchdog organization. It's not an oversight organization, because there are other organizations that are established to do that. What this board does is defined in an unclassified executive order. It was established by President Eisenhower, and every President had it until Mr. Carter who did away with

it; and it was reestablished by President Reagan. It includes distinguished people from all walks of life; lawyers, scientists, teachers, astronauts. People like Frank Borman, Henry Kissinger, Claire Boothe Luce, Jeanne Kirkpatrick, Edward Bennett Williams, a lawyer, a sportsman, people like that.

Oettinger: He owned the Washington Redskins.

Demech: He used to own the Washington Redskins. He now owns the Baltimore Orioles. People like that who are really patriotic, who are really super people to do the things that they've done, some of them at great sacrifice. In fact, it was just in the paper that the President has asked them to review in the next 90 days the security not only at the Moscow embassy, but also at all embassies the United States has all over the world.

Oettinger: That's been overdone, because he asked both the Board and Melvin Laird, and so forth.

Demech: It's overkill maybe, but I think they are looking at different aspects of the problem.

Oettinger: Usually one board is enough to paper something.

Demech: Just like you have the Tower Commission Report. There's a lot of information in there. I don't know that much more is going to be able to come out of the other committees, other than they'll get to the legal determination. Whether or not the laws are broken, we have at least a half a dozen people, or organizations, investigating what's going on.

What I hope doesn't happen, but they're talking about it already on the Hill, is that we make the complete circle and we go back to the way it was during the Church Committees, and because of the potential abuses or the actual proven abuses of a few individuals, the entire community suffers. We could take five steps back and not take any steps forward in the next couple of years. I think that could happen.

Overreaction? People concerned? It's the vogue thing to do today. Let me tell you one thing about Ollie North. I know him very well. You couldn't ask for a person more dedicated, more patriotic. Could it have happened that he did things that were not right? Perhaps. I'm not the judge because I haven't seen the facts, but maybe he went and did the job that he thought was right. He did get legal advice, maybe from some interesting sources. It's in the Tower Commission Report that the intelligence

oversight board had given him legal advice instead of lawyers from the Justice Department.

Oettinger: Instead of being the oversight board.

Demech: That's right. They have lawyers, and that's a criticism in the Tower Commission Report, but that's the type of individual. A lot of the things that have happened, and the criticisms, are unfortunate because not only has the institution suffered, but also the military has suffered, the President has suffered, a whole bunch of people. Six months before that these guys were heroes because of the *Achille Lauro*. They were the ones who designed the whole operation, and carried it out to a successful conclusion, almost. Six months later they're the bad guys.

Admiral Poindexter, when he left the White House, did not even think about a lawyer. It was four months before he did. He even resisted getting a lawyer. He didn't think he did anything wrong, or that anything was wrong. I don't know what's going to come out. He's a very intense individual, a very super patriot; one who was very careful throughout his whole career. He was at the top of his class at the Academy; a nuclear surface warfare officer. He's been over there since 1981, and then to have all this happen. It's interesting to see what's going to happen as a result of all this. I'm sorry to see it.

Student: I'd like to get back to the PFIAB experiences for a minute. What is the bureaucratic response to an organization of nonprofessionals, although distinguished and supposedly having the ear of the President? What happens when they send out a memo requesting information from the bureaucracy? What's the response generally?

Demech: The bureaucracy could be very, very resistive, but the Board was very fortunate because one of the biggest supporters of the PFIAB, when the Board was resurrected, was Mr. Casey. He was in charge of the entire community, so there wasn't any resistance. One of the problems that the Board did have was reestablishing its bona fides or credibility after being out of business for four years. Several of the members who were appointed to this Board had served on previous Boards, so there was that continuity.

You had some distinguished Americans who were proven people who had worked before in this business, who knew the business, and had previously served in the community, so they couldn't pull anything over their eyes. But any time you have someone looking over your shoulder, that's a problem. That's why Admiral Turner recommended to Presi-

dent Carter that the Board be done away with. He didn't think that with all the oversight committees on the Hill, he needed someone looking over his shoulder within the White House. Again, it was a turf battle.

President Carter during the Soviet brigade in Cuba fiasco wanted to bring back the PFIAB. Mr. Brzezinski* mentioned this in his book, and a couple of times in his talks, and politically they just couldn't bring themselves to do that, to admit that they were wrong and bring it back. They wished they had never done away with it. It's like a safety valve. You can turn to them and gain a bit of information.

Don't forget, PFIAB was the group that started the famous A team versus the B team, with Richard Pipes heading it up. Everyone thought that the estimates that the intelligence community were producing were biased, that they were either underestimating or overestimating what the Soviets were up to, or what their strategic capability was. It was the beginning of competitive analysis. That's something I haven't mentioned, but there is a great deal of competitive analysis going on as a result of PFIAB.

Oettinger: You'll see an account of it in Lionel Olmer's presentation.

Demech: Yes. I think it was called, "Watchdogging Intelligence," some years ago.** It was very good, and exactly right on. We didn't talk too much about competition, and competitive analysis, but it does go on. And, again, how much? If you're going to deliver two different analyses up to the President, whose does he take and what decision does he take? The DIA and the CIA have always argued on two things. The oil problem; was the Soviet Union going to be a net importer or exporter of oil? The CIA said by 1986 the Soviets would be importing oil. Obviously, they were proven wrong. The second issue is the cost of the Soviet military establishment, which has always been a subject of controversy, and DIA and CIA have never seen eye to eye. They compete, and they come up with different figures. They both go forward.

Oettinger: I think that that's helpful to the harried decisionmaker. With so much of the world tied up in things that look like expert matters, and with no

ability to discern fantasy from reality, I think a notion that two bodies, at least, can come up with different assessments of things that on their surface look like numerical, credible kinds of things is very helpful to give some freedom of action to a decisionmaker.

Demech: This Foreign Intelligence Advisory Board insisted on the community subjecting a lot of what they were doing to outside scrutiny. For instance, they granted clearances, and brought in economists from colleges, universities, and businesses to take a look at the facts and the figures. They knew the economic models. They knew how to put all the information together and come up with their own conclusion and see if the community was doing the right thing. Don't forget the community has lawyers; they have economists; they have the Commerce Department; they have everyone that they can turn to, but maybe they were biased. So they exposed these analyses and these estimates to outside scrutiny. You'd be surprised with what they came up with.

Student: In 1976 when Hughes-Ryan came into effect, covert action was basically discontinued in the foreign intelligence service. It took until 1980 and a new presidential administration for it to come back under the oversight act. We've been exposed to what happened with the Tower Commission and their evaluation; you just mentioned to us that there was very poor intelligence. How much could covert action have made a difference, in knowing what was really going on? I don't mean just from our players, but for making better decisions in our NSC, as opposed to with their hands having been tied for X amount of years? What's the value of covert intelligence in general in understanding the people that we don't understand?

Demech: It goes back to what I said before: getting information in a society where we would stand out like a sore thumb. I think that covert action in certain circumstances is appropriate. Highly controlled, within and in accordance with the laws that we have, keeping the proper people informed. Getting a person in Teheran, and having that person successful, and getting the information out, is a valuable capability.

Ross Perot, when he got his people out of Iran, selected people who could pass for Iranians. We sometimes send blonde people into the Middle East, and try to use them as undercover agents. Or, Chinese in Central America. We've done that! It just doesn't work! That's part of the problem. Covert action can be helpful. That's just like wiretapping.

*Zbigniew Brzezinski, President Carter's National Security Advisor.

**Lionel Olmer, "Watchdogging Intelligence," in *Seminar on Command, Control, Communications and Intelligence, Guest Presentations, Spring 1980*. Cambridge, MA. Program on Information Resources Policy, Harvard University, 1980.

Wiretapping was declared virtually illegal, a violation of the Fourth Amendment, an illegal search. There are now laws that say under certain circumstances you can do this when national security is at jeopardy. It can work, but you cannot have it out of control.

Why do people say we're not going to let Congress know? I think Congress now has learned a lesson. Senator Inouye is looking for the leaker on his staff about what Mr. Casey said. When you have 535 people who are going to have information, it's difficult. It's not that they're not patriots or anything. A person who is not in the business forgets sometimes where he or she has heard that information. You're at a cocktail party and you say something, and someone picks that up and it can be reported. It's very difficult. I think the people on the Hill have seen that, and now they've got to join both committees and reduce them to one committee and have it reduced in size, both the House and the Senate. There's a reason for covert action.

Oettinger: The central message goes back to Fred's point about things going around in circles, or spirals, or something. One of the reasons they do is there are things that are matters of balance, and not a matter of this being right and that being wrong. At the time of the Church Committee, the policy was that congressional oversight was going to be a matter of total openness. You couldn't run anything covert.

The good news is that over the years since there's been congressional oversight there hasn't been a hell of a lot more leakage out of the Congress than there has been out of the Executive Branch. The bad news is what you've just given. As soon as there are more people, there is greater probability of leakage. So you now redress the balance. You don't go back to the way it was before with no congressional oversight. You reduce some of the numbers.

Demech: The survey that asked officials if they used intelligence also asked the question, "Did you ever leak information?" The people didn't have to sign it, and didn't even have to fill it out, but most of them did. Most of them said at one time during their time in the service of the government, they leaked information as a way of enhancing their policy, or getting their way, or accomplishing their victory. The biggest leakers are the leakers who are part of the government. That's a known fact.

Oettinger: Also, the higher up you go, when you get to the level of the President then it is no longer, in a sense, a leak.

Demech: That's right! It's policy.

Oettinger: It's a matter of policy.

Demech: KAL-007, that was not a leak. They said they were going to prove that the Soviets were doing this, and they put out classified information.

McLaughlin: Jimmy Carter and stealth, and Lyndon Johnson with the SR71.

Demech: Sure.

Oettinger: And every once in a while that gets the President in conflict with the bureaucracy. You say, "Look, we've worked hard to get this. You're revealing sources and methods. You are costing us money, and so forth and so on." But ultimately at a high enough level that is a policy decision. The President says, "By God, for better or worse, reveal it even though it costs us money, resources, whatever." These tensions are inherent. I think one of the things that disturbs me about a lot of the literature and arguments in the press and so on is this notion that somehow there is a definitive answer to many of these problems. It's a matter of coping with balances, and continuing tensions.

Demech: Well, you would hope, too, that to the American people and the public, Congress is a governing factor in this whole thing. They have to know about the information. If the American people knew that most of their telephone calls were being intercepted and recorded by a foreign power, they would be outraged. Your call to your girlfriend, and whatever sweet nothings you say, are being recorded, put away for potential further use, or blackmail. They would be outraged if they understood that most of their telephone calls are not secure telephone calls. They are not on cables. They go via microwave or some other means that can be easily intercepted. They would be outraged! I would guarantee it, especially in Washington, D.C.

Student: I suspect that there's been some leakage on that subject. I suspect most of them would say, "Well, more power to them." Think of the miles, and miles, and miles of tapes they have and the effort they must devote to trivia.

Demech: That would be one reaction because that story has come out at different times.

Student: I can see where intercepting particular call numbers and a few things like that, where you could design a computer to do some searching and give you some specifics, would be useful, but my telephone call to honeybunch, even if I lived in Washington, is not apt to go into anybody's file for very long.

Demech: Depending upon your position. A computer just puts away names, and you never know when the name recognition comes up and is going to be the indicator. By the way, we do an awful lot of processing of information based on indicators. Artificial intelligence does it, and it determines that if it meets a certain threshold, by name recognition, or by some other word, then it goes and grabs it and does something to it.

Student: You can always try one of these little games where you try an overload, and if they tried to overload us in that message system

Demech: I would hope that we would do that, but sometimes, again, we don't like to play those games, as you know.

Student: They are the easiest ones to play and frequently the most effective.

Demech: That's right, and that's another subject of controversy, and probably a very, very sensitive subject in the government today. It's an interesting, fascinating problem, the information problem; the command and control. It's one that's going to be with us. It's always going to be used, and the advances in technology scare people. When you talk about the latest supercomputer that NASA is using, and some of the statistics involved in the darn thing, it's just incredible. It will perform the task for more than 300 researchers at the lightning speed of millions of computations per second. The Cray II has a 256 million-word internal memory. It's a four-foot high brain, cooled by floating the wires and chips in an inner fluid that draws away excess heat. It's the one that's used to design, in three-dimensional graphics, the new airplane, the Orient Express, that's going to fly at 8800 miles an hour.

You're talking about fifth-generation computers. There's another area where intelligence will play a role. Do we build the fifth-generation computer? Do we let someone else, like the Japanese, build it, and then take advantage of what they're doing and make the quantum leap and go to the seventh-generation computer, or the sixth? Can that be done? That's an incredible device. I remember the first supercomputer that the intelligence community had. It took a whole building. There are now desktop supercomputers that you can buy for half a million dollars, by just tying together a whole bunch

of parallel processors in a room like this. You'd be surprised how many of those are available. We just got statistics as to how much money people are spending: billions of dollars on mainframes, and then twice as much being spent by people who have minisupercomputers that they can buy and use in their own homes.

Student: And they're all going to be obsolete three years from now.

Demech: That's right. You talk about espionage; you talk about lasers and fiber optics being used to penetrate these windows, and by picking up the vibrations on the windows, they can record everything we're saying, and use a computer to get only one word out of five, and reconstruct the whole conversation. Even by stretching to a finer degree, one out of ten words, and then they can reconstitute virtually the entire conversation. What people are doing now is to put music in the windows to create artificial vibrations so that they can't penetrate. It's just incredible.

Intelligence is there, military or civilian. Believe me, there is more secrecy concerning bank transactions today, electronic banking, than in any other business, because of what's happened. You know that these perfume companies in Paris guard the formulas for their perfume better than we guard some of our most important secrets in the government. Trade secrets. Remember the formula for Coca-Cola? Two guys have it, and they never travel in the same plane. They never drive in the same car. Look at the controversy over it when they changed the formula.

McLaughlin: Part of this just reflects, though, eternal verities. Any system has a range of vulnerabilities. I look at this thing with the Marine guards in the embassy, and here in the age of high tech, we're back to playing Mata Hari. Any system you design has some points that are going to be more vulnerable than others. Sometimes it's the technology. Sometimes it's the human beings operating it. If you can't get to the technology, you may get to the human beings.

Demech: The strongest link, and the weakest link, is the human being.

Oettinger: Well, I think on that note, I want to thank you very much.