

*Interview with Uzzi Rozzen
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Mithat Bereket (MB): Well first of all, tell us about the capabilities of the UAVs. How can they be used for important intelligence gathering, and what else can they be used for?

Uzzi Rozzen (UR): Actually, UAVs are used basically the same as manned aircraft. You send them to the area of interest, they loiter over the area of interest, they gather the information, and they transmit the information back to the users. The whole difference is that you don't risk the troops, the operator of the sensors, and operators of their vehicle.

MB: Can you give me some more detailed information about the UAV? I mean how big is this in size, who is flying it, where is this pilot sitting, how far, how long can they fly, whether they can carry bombs or not, and what sort of cameras do they have?

UR: Starting from the very low end of UAVs, we are speaking about very small UAVs, with the weight of about 5, 6, 10 pounds. Those kinds of UAVs can spend about an hour, up to two hours in the air, with a radius of about 10 miles from the users. And then we go to the tactical UAVs. Tactical UAVs are usually in the range of about 50 to 100 kilograms, they can stay in the air about 6, 8, 10 hours. They can operate in the radius of a few dozen miles from the users. And then we go up to what we call the Male UAVs. MALE stands for Medium Altitude Long Endurance.

MB: Oh, it does not have to do with the sex.

UR: No, not at all. So the MALE UAVs are the very large UAVs that can stay in the air up to 40, 45 hours. They operate in the altitudes of 30-40,000 feet. And actually they can operate in the radius of hundreds of kilometers from the users.

MB: So the user can be in the States and using these MALE UAVs?

UR: Absolutely, yes. And then, from the MALE UAV, we go up to the very high end UAVs, those are the HALE UAVs, High Altitude Long Endurance UAVs. And those UAVs can stay in the air 50, 60 hours and they can operate with no limitation of radius of operations.

MB: What sort of operations can they do, apart from picture taking or video taking?

UR: The main tasks of UAVs are intelligence gathering. They can use different kind of sensors from electro-optical sensors – electro-optical sensors can be day cameras, night cameras, then we can go to radar sensors. You can use the radar in bad weather, for example, to see behind the clouds.

MB: So they can fly night and day, rain and snow.

UR: All weather, no matter what are the conditions, with the current technology and the current sensors, actually they can gather information regardless of the weather and whether it is day or night.

MB: So how much money are we talking about? What's the cost of a high end, let's say HALE, or MALE UAV?

UR: Speaking about cost, the main issue of UAVs is not the cost of UAVs. UAVs are not less expensive than manned aircraft. The main advantage of UAVs is that you can perform those missions without risking troops. This is the main advantage of UAVs.

MB: So give us a price, how much would it be? If one country wanted to buy one, like Turkey for example, approximately

UR: Generally speaking, without getting into the numbers, operating the UAVs, and I'm speaking about the high end MALE and HALE UAVs, you have to think in the same magnitude of operating manned aircraft.

MB: Like F-16s?

UR: Like F-16s

MB: They are expensive.

UR: Yes. This is very expensive, but on the other end again, I have to emphasize. No risk to the troopers.

MB: Coming to the question in the case of Turkey, now there is a terrorist organization that has bases in northern Iraq and uses these bases for logistics, supplies, and to sneak into mountainous areas between the Turkish Iraqi border, and attack the Turkish soldiers and then come back. Now, how can the UAVs be used in these mountainous areas, for example, for the sake of gathering intelligence and for the sake of following these terrorists?

UR: Of course I'm not familiar with the concept of operation of the Turkish forces. But you have to keep in mind that UAVs are not by themselves over the area. Actually, are members in a much more complex network in which you can see UAVs, helicopters, manned aircraft, ground troopers, etc. So with the current communication technology, I believe that the users will use UAVs as members in a much more complex network than just use them by themselves.

MB: So what is the advantage or the difference in UAVs or UAV pictures that are taken compared to satellite pictures for example?

UR: UAVs are much more different than satellites. The only common denominator is that both are unmanned. But satellites, once you launch satellites and put the satellite into orbit, then first the satellite is going to stay there for years. Not hours, but years. Many years. On the other end, there is a very, very limited way to control the orbit of the satellite. Once the satellite is in orbit, he's going to stay in the same orbit.

MB: So you have to wait

UR: So you have to wait for some time, absolutely, you don't have the capability of staying above the area of interest, but on the other hand you have coverage of a very, very large area.

MB: With the UAVs, are they like planes, for example, flying over that you have to keep them in a certain area, or can they hang in the air?

UR: The fixed wing UAVs are like fixed wing manned aircrafts. And there are rotary winged UAVs that fly like helicopters, of course. But you have to keep in mind that some of the fixed wing UAVs have very large wings, and with the very large wings you can actually stay over the target almost like helicopters. But basically UAVs fly the same as manned aircraft.

MB: And also, there is another important expiration coming up in the intelligence world called real-time intelligence. What does it sort of symbolize, what is the real time intelligence, and what is the use of UAVs compared to satellites of real time intelligence?

UR: Yes, real time intelligence means that the users, whether they are the troopers or the weapons system operators, or the intelligence officers they got without any delay, *any* delay, they got the process of information directly from the sensors. You have the sensors over the target, you get the processed information without any delays directly to the user, no matter where the user is. Behind a hill, or 100 kilometers away. This is the meaning of real time intelligence.

MB: And how come, I mean if a user is sitting in Washington for example, operating a UAV in the southeastern part of Turkey on the Turkish-Iraqi border. Once he makes a move, will there be any delay from second to second

UR: The delay is no more than very very few seconds. The delay is about one to three seconds, no more than that, it depends on the distances. But this is the delay, not more than that.

MB: So if I sit here I can see live pictures at the same time from the UAV

UR: You can see live picture without any delay, this is the main idea.

MB: So that's how you can watch them get real time intelligence of the situation, on the spot.

UR: Absolutely.

MB: Tell us a little bit about your company as well. I mean what sort of company is IAI?

UR: Our company, IAI stands for Israel Aerospace Industries, and speaking about UAVs I believe that our company was the pioneer for UAVs. We are in the business of UAVs for about 30 years, and we are developing and producing the whole range of UAVs from the very low end to the very high end.

MB: And Turkey has sort of expressed its interest in buying a UAV. Have they gotten in touch with your company? Will you be selling any UAVs to Turkey?

UR: It has already been published in the past that the Turkish government has decided to buy Israeli UAVs, and this is in the process.

MB: And it's not been finished yet...

UR: It's not been finished yet, it's in processed, but it will be finished

MB: Will it be high end UAVs or low end UAVs? Can you give us some clues?

UR: I can give you one clue. It is going to be high end UAVs.

MB: And of course with the selling of the UAV, you also give the training I believe because the usage of the UAV, the commanding is more important than the UAV itself maybe most of the time, the operating it?

UR: Yes, of course. Again, it's very similar to manned aircraft with selling the product, you sell the know-how to operate the product.

MB: And what sort of capability do you think this new UAV will add to the Turkish army that they don't possess at the moment?

UR: I'm not familiar with what the Turkish army has right now or not has, but I believe that having the UAV capabilities, again what is most important, is UAVs save the lives of the troopers. This is the main idea. So it's not only the technology advantage and the effectiveness of the systems, but also saving the lives of the troopers.

MB: And they cannot be seen from the surface?

UR: The UAVs can be seen from the surface, of course.

MB: So the targets can sort of destroy it, if they can see it.

UR: Absolutely. UAVs can be, we are trying to develop the UAVs in a way that they will be less vulnerable to a ground to air fire. But no doubt that the UAVs are targets like everybody who is over the area of interest, UAVs are targets to the AAAs, the Anti-Aircraft Artillery, no doubt about it. But we believe that the performance of the UAVs, we put the risk to the UAVs to the minimum. But again what is most important, no risk to the troopers. No risk to the operators. This is what is most important.

MB: Also, when the Turkish army started to get intelligence sharing from the US, they started to pinpoint several operations, air operations, even at night, to the northern Iraqi base camps of the PKK. But just after one operation they continued with the laser guided missile, shelling. Now can UAVs do this as well, the laser guidance on the targets, like normally being done by men?

UR: Absolutely. You can put laser designators on UAVs, and UAVs can designate the targets to the artillery, or to other troops. No doubt about it.

MB: So this is multi-purpose. Can they be used for bombing as well?

UR: This is what I say that UAVs are not operating by themselves. They are part of a network. And you have just described such a network. UAVs, ground troops, weapons systems.

MB: So they in a way fly over the target to reflect the laser beams

UR: They detect the target, then they designate the target by laser, for example, and then you can shoot missiles from the ground to those targets

MB: Like pinpoint shooting.

So where is this technology going now? I mean what sort of new UAVs are you working on and what will be the capabilities of the UAVs? Does that mean that the manned aircraft will be finished in ten years time for example?

UR: I don't think so. Manned aircraft will still be here in ten years from now, I believe. The technology is improving, speaking about UAVs. But at least in the coming decade, I believe in more than one decade, we will still see missions that have to be performed by manned aircraft and not by UAVs.

MB: So to wrap it up, what are the basic usages, basic advantages of the UAVs for an army, considering the Turkish army for example?

UR: Speaking about basic uses, I would say that basic uses for the UAVs is intelligence gathering. This is the basic usage. Speaking about the main advantage of UAVs, saving the lives of the operators. Pilots, no pilots. Pilots are sitting behind the hill, hundreds of miles away, or dozens of miles away.

MB: And UAVs cameras, do you get still pictures or video pictures, or both?

UR: Both. You can get still pictures, you can get video pictures. Speaking about real time intelligence, of course screen pictures, video pictures. Moving pictures. Those represent the real time intelligence. But you can get also still pictures, whatever you want. With the current technology, you can get everything.

MB: And you can add more sort of movements or operations to the UAV in the future maybe?

UR: Yes. Right now in the high end UAVs, speaking about our high end UAVs, you can put not only one sensor, you can put few different sensors. You can put electro-optical sensors, you can put radar sensors, you can put some what we call passive radar sensors, you can put communication reelers, you can put many sensors. So in a way it's a multi-mission.

MB: More than a manned aircraft perhaps can do?

UR: Again, not more than a manned aircraft. A manned aircraft can do almost what a UAV can do. But in a typical intelligence manned aircraft, you have a crew of five, six, sometimes 12 people. Those people are at risk. So while they are in risk, they cannot be so effective as a UAV that can fly directly over the target. Because nobody is in risk, this is the main advantage of UAVs.

MB: And very lastly, which countries at the moment have UAVs?

UR: I believe that right now most of the advanced military forces in the world, I would say that all of them, fly UAVs as well.

MB: And one more question about Turkey. Will you be selling one high end UAV or more than one high end UAV to Turkey, the Turkish army?

UR: Of course more than one. We are speaking about a system. You never buy one vehicle.

MB: How many all together?

UR: I will not get into those details. Those are between the two governments.

MB: OK. Mr. Rozzen, thank you very much for being with us.

UR: You're welcome.

