

Reporter: What I'm using now is a 3D display and to be able to watch 3D pictures I need these 3D glasses. But there is something odd here: you are going to see this 3D display without the glasses in 3D, because it is a special display that brings us to the future. In other words, in the near future we will have 3D displays that can be watched without glasses, we will have displays that have extremely high resolution. Let's take a look at the future of television with the employees of the Torino Central Research Institute: senior engineer Daniele Airola and Mario Muratori, also a senior engineer. (Some joking around being a senior engineer.)

Reporter: Mario, on the display we can see 3D pictures without using those classic glasses, how is it possible?

Mario: I think it's because this is one of most advanced monitors developed in Europe, and that it is a volumetric display, which means it can display the volume of objects and it is designed to do that. So it doesn't need other accessories like glasses.

Reporter: Among other things there is a very special thing here. If we see for example, a picture showing cards, when we look at these cards, even on a 3D display, we can see those realistic cards, but we can't see behind them. However these cards do have front and rear sides. How can you explain it?

Mario: The basic principle of how this monitor works is a bit complicated, but we'll try to explain it now. So, we assume, we are standing in front of these cards, and when we walk in front of the monitor we can see them from different point of views. But we actually see different pictures from every point of view.

Reporter: So it is like if I have a display that can show these cards from this point of view, then another, then another and then another again, so it's a sum of many different displays?

Mario: Yes, it is indeed the sum of many displays. In the case of common autostereoscopic displays we may have 7-9 pictures, but on this monitor, which makes it very special, we can see 80 pictures at the same time, so it provides a continuous, smooth view. (Example with the hand fan which represent 80 different points of view.)

Reporter: Look, so we can see any kind of pictures on it? (Examples)

Mario: Yes, I'd say that at the moment its most direct use is didactics. Regarding movies I think other aspects need to be inspected as well, at which we need to focus only when these monitors will be actually available on the market. Because it's practically a prototype right now.

Reporter: It is a prototype, but it exists.

Mario: It exists and it is already being sold, to much delight of its Hungarian developer company.

Reporter: How much does it cost approximately?

Mario: I don't know, maybe around a few ten thousand euros.

Reporter: A few ten thousand euros, but in 5 or 10 years, when everyone will have one at home, of course it will cost far less.

Mario: Let's say it in the other way: it will cost far less, so it will be affordable for anyone.

Reporter: Yes, absolutely true. Look, just for plain curiosity, on this display, if we have many projectors, theoretically we can see different things at the same time?

Mario: Yes, yes, yes, there indeed has been such usage of these type of monitors, which is not really connected to television, because if we consider that 80 different pictures are displayed at the same time, we can ask: why shouldn't we display a picture from one particular sector, and another one from another sector etc. I must say there are other, smaller monitors, for example in vehicles that provide the same functionalities.

Reporter: Then for example I, pardon me, let's take a real example; if I see the monitor from this angle, I can see a car, from this angle, a space ship, and if I see it from yet another angle, I can see the cards? So if this display would be in my car, then I, who is driving, could see the signs of the navigator while you, who is sitting next to me, could watch a movie at the same time?

Mario: Exactly. These are features that are offered by certain manufacturers already.

Reporter: Amazing. (After this they talk about the innovations of the Torino Central Research Institute.)