underwater drone. The PowerRay can dive to a depth of up to 30 m and comes with a 4K UHD camera that can capture MP4 videos at 30 fps and photos with a resolution of 12 megapixels. When underwater, images are transferred through a cable; as an optional accessory, there is a Fish-Finder, which can not only locate the angler's prey by means of sonar, but can also distribute bait. The manufacturer sees further possibilities for use in the industrial sector, because the inspection of underwater pipelines, ships' hulls etc. is far cheaper with a robot of this kind than the deployment of divers. The underwater drone should be available from the end of February. No official price has yet been announced, but it is expected to sell for around 2,000 euros/dollars. In the field of multicopters, there is a trend towards particularly small and easy-to-handle devices up to the size of a paperback. These flying saucers are intended above all for the selfie generation and should make it possible to take a self-portrait

PowerRay is the world's first underwater drone from PowerVision. One accessory is the FishFinder, which can also spread bait.

On the Canon stand, visionaries were welcome.

from all kinds of unusual perspectives. In most cases, the mini-drones are controlled via a smart-phone app.

Virtual and Augmented Reality, VR and AR, played a major role at CES. With the exception of digital games, many applications are still at the development phase. Nevertheless, the available products and hardware performance are very impressive for such a young product category. The classic construction of 360° cameras with two extreme wide-angle lenses is

Analog returns to the digital Mecca: In Las Vegas, Kodak announced the renaissance of the Ektachrome slide film, due on the market in September this year. It fits in with the Super 8 camera first shown a year ago and now ready for market. However, until the Ektachrome actually makes its return, the Super 8 must be content with color negative movie film. After processing of the film, the customer receives a 4K video file of his film.

almost outdated. Instead, more and more manu-facturers use several camera modules to capture the 360° panorama. The individual picture sec-tions are then computed to form a complete pho-to or video. Since this design reaches much high-er resolutions than the two-lens construction, it becomes much easier to cut out interesting seg-ments from the panorama and perhaps even print them.

The interface of tomorrow

As mentioned at the beginning, the trend towards controlling smart digital devices with the human voice is growing rapidly. Plus, the relevant systems are also working more and more efficiently. In 1995, the error rate was in practice nearly 100 percent, in 2013 it had fallen to 23 percent, and for this year, the industry anticipates a success rate of nearly 100 percent. The consequence is that keyboards, computer mice or touch-sensitive displays are become superfluous for many appli-cations because the devices can now respond to a voice command. This is not a dream of the future: The Echo loudspeakers from Amazon can already play the desired music on command with the help of the Alexa word recognition system. LG is incor-porating Alexa, for example, into its interactive refrigerator, which answers questions about recipes, makes purchases from Amazon etc. OK Google and Apple Siri can not only search on the Internet for a term spoken onto a smart-phone, they can also control functions and send messages or emails. In a smart home and in many other applications (also industrial), digital systems not only listen, they also think. Artificial intelligence was therefore

another topic at CES because it not only makes the devices smarter, it also enables them to con-stantly learn from their own experiences and from those of other networked devices. The self-driving car, for example, could, within the foreseeable future, inform all other networked vehicles about an icy section of the road, a free parking lot or a nasty hole. And security systems could warn their counterparts in the neighborhood of a burglar. In comparison, the refrigerator asking its owner whether it should order more beer is now noth-ing short of child's play.

No larger than a paperback: the copter C-me from Hobicco. It has been designed to take selfies.

Unfortunately, that's one finding from CES 2017, cameras and especially those from traditional manufacturers come across in this environment like dinosaurs from a pre-digital past. Instead of setting aperture and shutter speed with hand-crafted mode dials, you could ask your camera in a friendly way to take a portrait shot with an attractive bokeh effect or command the auto-focus to track the dog running along the beach. Unfortunately, unlike the makers of smart refrigerators, TVs or speakers, the established camera manufacturers do not seem to be really listening. But perhaps, or hopefully, the start-up company, which is smart enough to bring such intelligent features to the design of cameras, has already been founded.

The next CES will take place in Las Vegas from January 9-12, 2018.