

Condor 3D Software Driven Intra Oral Scanner, the Biggest Breakthrough in Oral Care



Prof. Francois Duret at IDS 2015 with his innovation of Condor, revolutionary software driven intra oral scanner

The Condor 3D Intra Oral Scanner is running on [Manjaro Linux](#) a flavor of [Arch Linux](#) which is called a "rolling-release" type Linux. It is different because it always has the latest and greatest in bleeding edge software. The reason it is on Linux, is it is an open platform, and Linux has minimal overhead in hardware specifications, can be secured unlike any other operating system is able to be, which is vital to ensure people don't pirate the condor software. Linux also has the ability to do real time processing, and this is where it is most important for the overall project. The magic happens in the software, not the hardware. The usual approach to hardware is to have the logic and processing done in the device and pass the information to the computer, this is because Windows is incapable of doing real time processing efficiently. This is the flaw with the competitors of Condor, because now the Condor can be made as small as you can fit the Gyro for positioning, and cameras. Even while not completely optimized the condor showed as a prototype at IDS to be small, lightweight, ergonomic, and extremely fast. The hardware it relies on is an MSI Gaming laptop, with a customized version of Manjaro with modified Nvidia drivers, Condor relies on both the Intel Core i7 and the Nvidia GPU to do the processing in real time. The actual wand is small, relies on two cameras to triangulate the data, and this is something the Condor competition certainly does not have, relying on the same sort of algorithms satellites use to triangulate GPS. When all is said and done, "two heads are better than one" is certainly the truth when it comes to having two cameras in an intra oral scanner. It uses those two cameras in conjunction with a gyro in the wand to determine the position. This is all transferred over USB 3.0 as there is a lot of raw data being passed through to the laptop, leading to really easy, and really fast intraoral scanning.



Prof. Francois Duret at IDS 2015, showing his earlier works pioneering dental digital imprint

SmileMe Software for a Great Before and After Photo

SmileMe is a great software that allows for quick before and after photos. You can create a profile of the patient's smile. Go through and be able to create a quick before and after simulation to give an idea to the patient what they will look like. You can do the full smile or even individual teeth movement. It is all quick fast and easy. As simple as taking a photo, erasing the teeth, aligning a new set of teeth adjusting the color of the gingiva, teeth, arch, and various other aspects of the set or even individual teeth, while being able to print several possible outcomes on one single sheet.

Next Breakthrough to keep an Eye on: Holographic Heads Up Display (HUD)

The Holographic interface that was seen is mind blowing. Your imagination is the limitation, when it comes to what capabilities this technology will have. It produces a sort of augmented reality with a holographic overlay in the lenses, think Google Glass, but on steroids. While it is a working prototype, it is mostly finished, with only minor tweaks needed to the interaction, as well as the device will be made wireless. What wireless technology whether it is regular microwave, WiGig, Bluetooth, or another is yet unknown as of right now. However interfacing with the device, was rather simple to control for the people growing up in the tech age it's simple. For the older generation, I noticed a slight learning curve, but I think that has to do with the manner of devices each generation is raised with. Takes at most 15 minutes to get accustomed to. This technology will be incredible to be worn while doing an intra oral scan, because then you can see results in real time right before your eyes, and be able to blow the scan and potentially see any problems that may arise with dental work. The technology isn't just limited to dental, but also other fields, as said before your imagination is the limitation.

Reference(s): Prof. Francois Duret CEO [aabam.net](http://www.aabam.net) (<http://www.aabam.net>)

Infographic(s): [dtg3d](http://www.dtg3d.com) (<http://www.dtg3d.com>), and [aabam](http://www.aabam.net) (<http://www.aabam.net>)

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(https://eliezerganon.files.wordpress.com/2015/04/fb_img_1426286246268.jpg)

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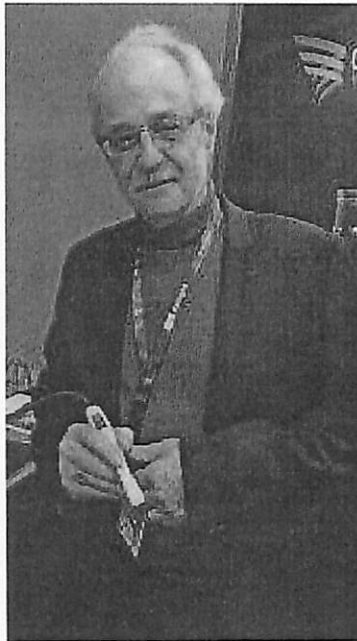
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New Technologies

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