Association INSTITUTS CARNOT

Carnot institutes network

Research and innovation for industry

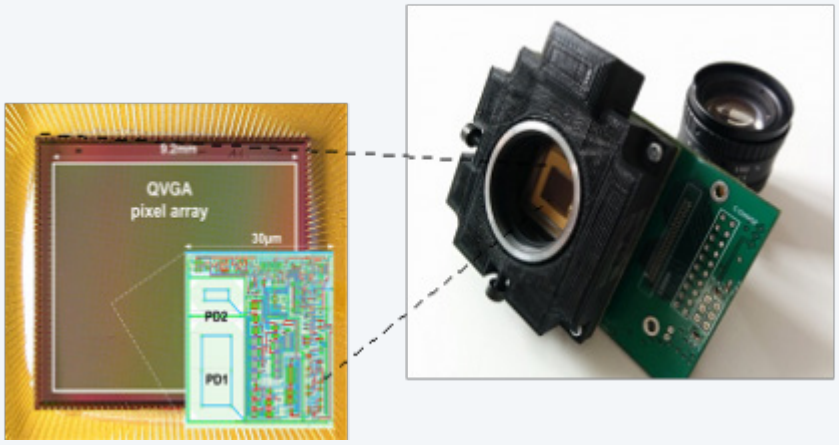
Partnership with Voir et Entendre Carnot Institute - Atis

From the treatment of blindness to Super Bowl

Atis, from Research to global industrial success.

Supporting Innovation

ATIS is a camera whose system core works in a similar way to the eye retina. The bio-inspired vision sensor operates in an asynchronous mode on a stream of per-pixel incoming events rather than displaying conventional split-action movement by superimposition of successive images. The sensor performance in terms of data acquisition, encryption and energy consumption makes it an essential and unique choice for applications requiring capture of real-time data.



The client needs

This technology was first applied to respond to the specific needs related to the development of bionic vision systems (artificial retina). Such systems require an expedite processing of images associated with encoded information adapted to the specific retinal and cortical features.

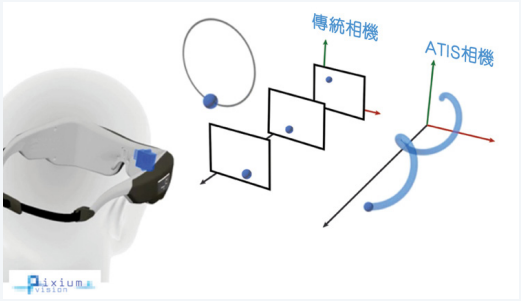
The IRIS2* device, which is going through a clinical assessment, is currently being developed by **Pixium Vision**, a leading player in the treatment of blindness. The device, combining both an ATIS sensor and a retina implant, allows observed subjects with retinitis pigmentosa (RP) to perceive certain patterns of light and some shapes of objects and acquire a greater degree of autonomy in their day-to-day lives.

Beyond the more constant medical activity, ATIS high potential was the key reason for setting up French spin-off **Chronocam**, to further develop its use across all image sensor markets (haulage, robotics, security, video games), and in the not too distant future improve instant replays at major sporting events such as the Super Bowl!

*Intelligent retinal implant system, second generation

Partnership

The **'Voir et Entendre' Carnot Institute** is one of the leading integrated Eye Research centresin Europe. It was in this Institute that the team of researchers and mathematicians designed the sensors and algorithms in co-operation with Pixium Vision. On top of this, the Institute is concurrently working in close collaboration with Chronocam. These various exchanges show the Carnot Institute's ability to effectively integrate into the economic and industrial realities of innovative enterprises.



Chronocam

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