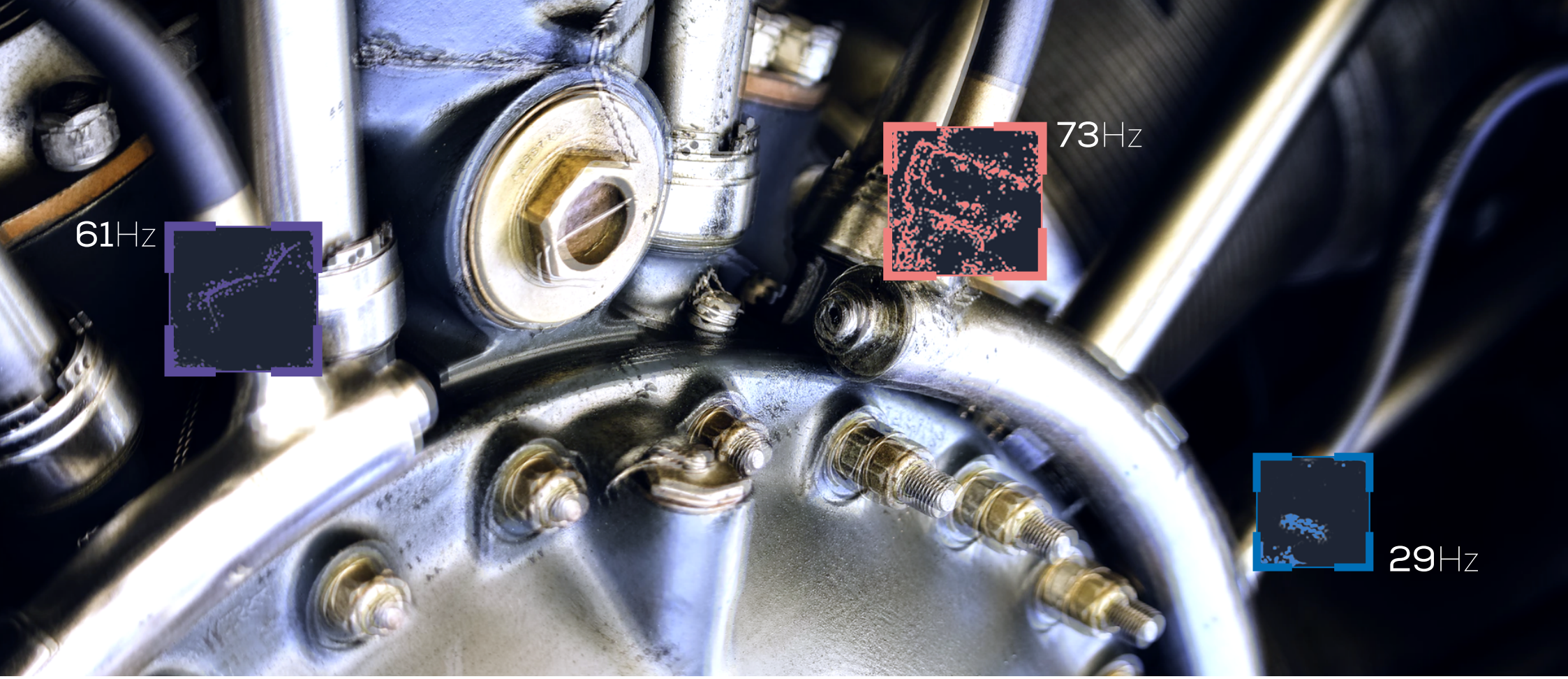


REALTIME VIBRATION MONITORING

PROPHESEE

METAVISION FOR MACHINES

PROPHESEE

METAVISION FOR MACHINES

REALTIME VIBRATION MONITORING

Prophesee is the inventor of the **world's most advanced** neuromorphic vision systems.

Its Metavision® technologies, composed of a proprietary Event-Based sensor and algorithms, dynamically captures only **the most relevant information**, in real-time.

Gives you the tools you need to unlock a new approach to **predictive maintenance.**

From **1Hz** to **1000Hz**
Accuracy of **<1 pixel**
Non-intrusive installation

more information: **https://www.prophesee.ai/contact-us/**

WHAT

Prophesee Metavision® enables the accurate measurement of frequency of periodic phenomena such as vibration, rotation, translation.

Metavision® Intelligence algorithms output maps of periods in the scene. These maps can then be processed to extract and present the relevant information to the end-user in the form of a histogram, an image, a table of frequencies/periods for example.

SCAN TO LEARN MORE

bit.ly/FreqMeasurement

FREQUENCY SIGNATURE MEASUREMENT

Figure 1: A motor is attached to a vibration generator, driven by a frequency generator

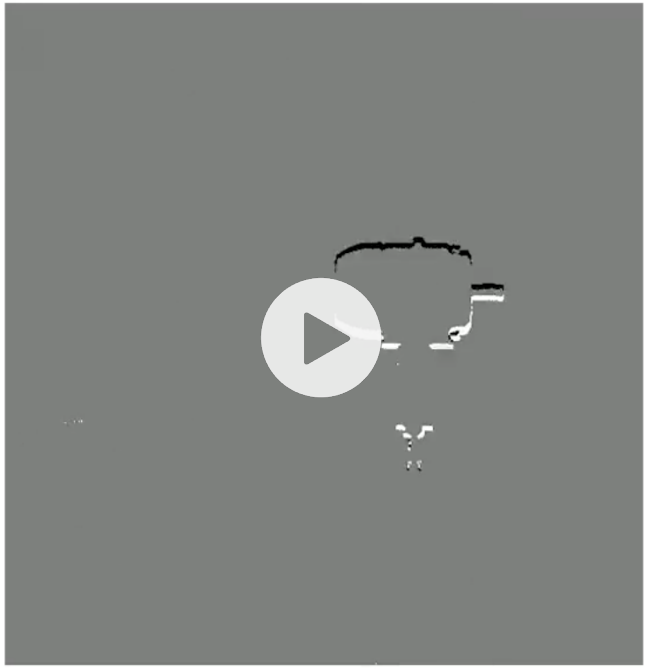


Figure 2: Raw output of the vibrating object

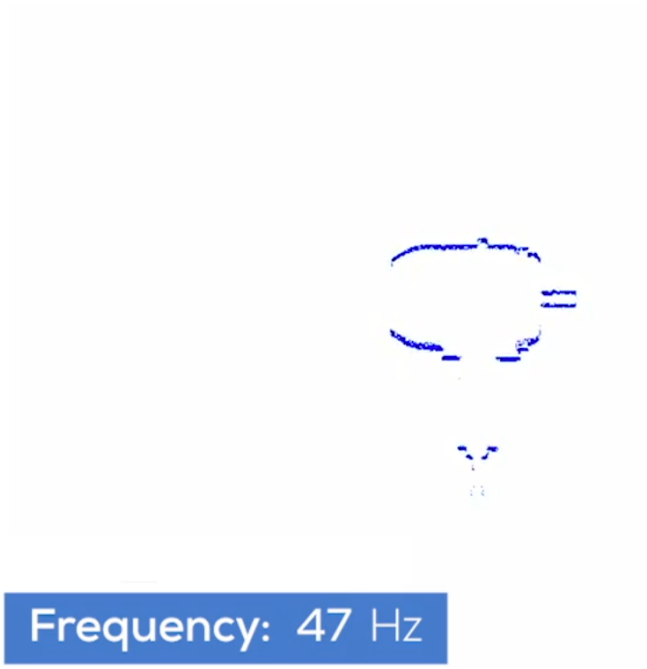
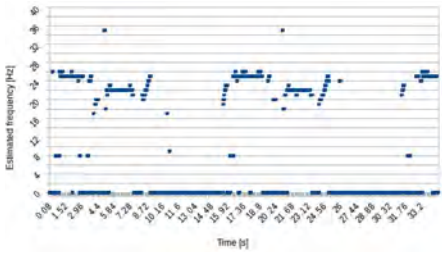


Figure 3: Frequency map with main frequency displayed

HOW

Prophesee's technology inherently tracks the temporal evolution of pixels in a scene. For each event, the pixel coordinates, the polarity of the change and the exact timestamp are recorded. By following the temporal evolution of these changes, pixel by pixel, it is possible to extract the ones having a periodicity. For each of these pixels, the period is extracted.
This generates a map of periods only for periodic pixels. The output data is then intrinsically sparse and can easily and readily be analyzed.

VIBRATION SIGNATURE



SCAN TO LEARN MORE

bit.ly/VibMonitoring

MULTI-POINT FREQUENCY MEASUREMENT

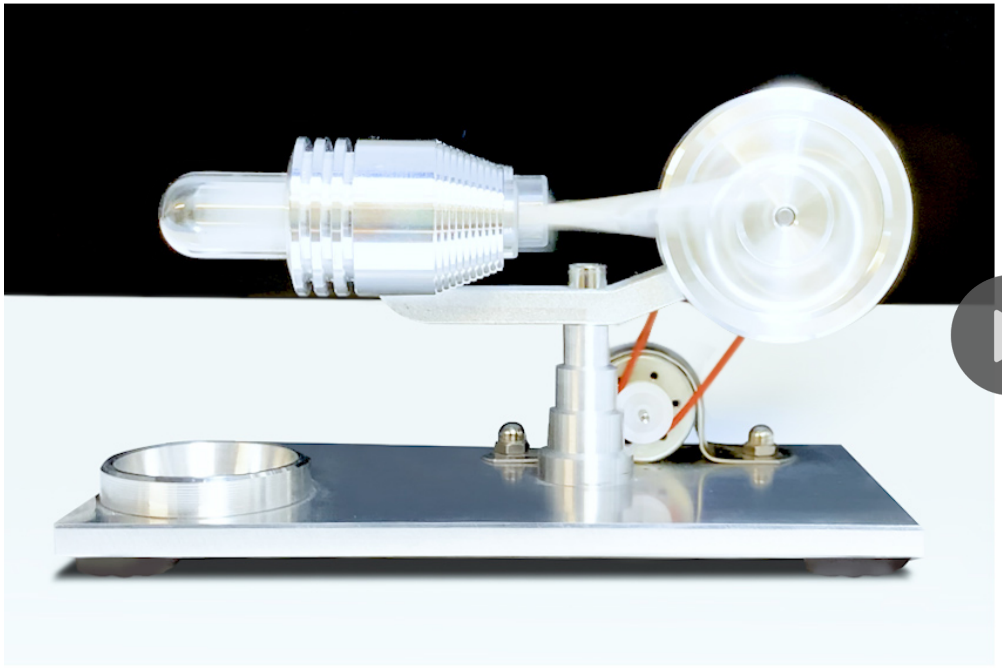


Figure 4: A motor is operating under abnormal and regular conditions

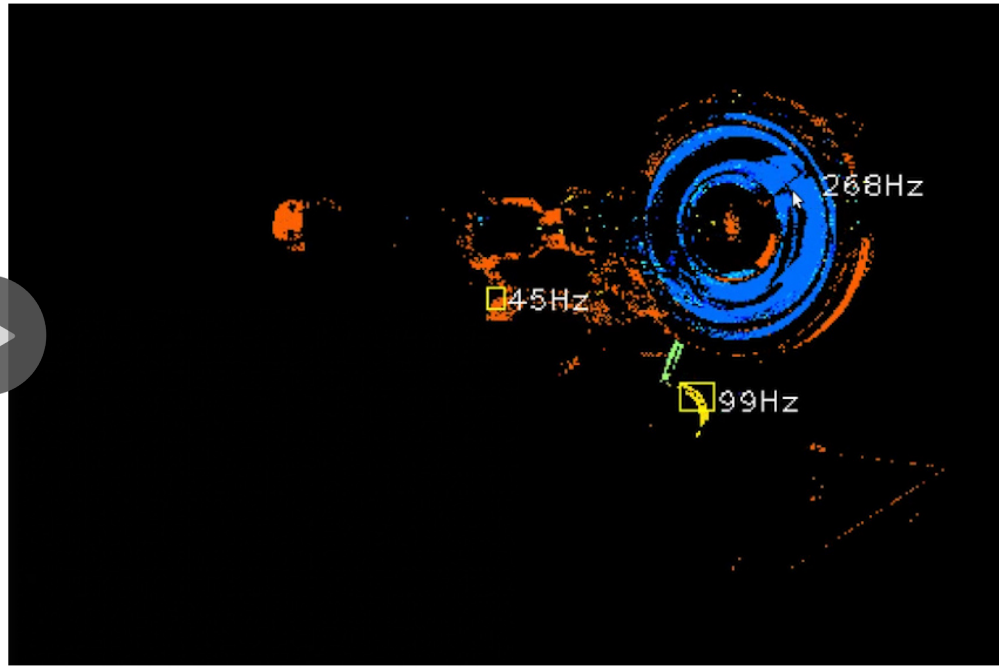
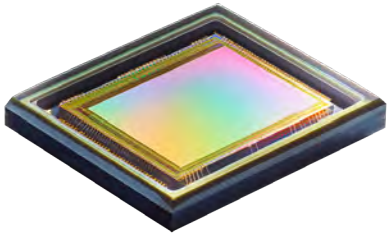


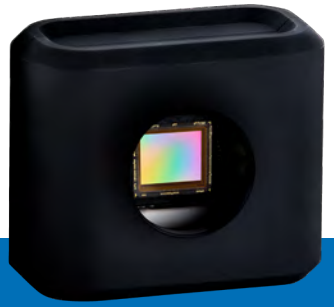
Figure 5: Frequency signatures are monitored pixel by pixel or by setting Regions Of Interests

HARDWARE



METAVISION® SENSOR PACKAGED

- 640x480 VGA Event-Based sensor
- Package: 13x15mm mini PBGA
- Dynamic Range: >120dB
- Typical Background Activity: <1mHz
- Max. Bandwidth: 66Meps



EVALUATION KIT

- VGA Event-Based Sensor
- USB Powered
- IMU

SOFTWARE

PLAYER

Metavision® Player is the perfect tool to start with, whether you own an EVK or not. **It features a Graphical User Interface** allowing anyone to visualize and record data streamed by **PROPHESEE-compatible Event-Based Vision systems**

DESIGNER

Metavision® Designer is a tool that allows engineers to **interconnect python components very easily for fast prototyping** of Event-Based Vision applications

SDK

Metavision® SDK is the largest set of **C++ Event-Based Vision algorithms** accessible to date. Algorithms are available via APIs, **ready to go to production**

SCAN TO LEARN MORE

METAVISION® SENSING

Prophesee third generation **Metavision® sensor,** is now available in an **industry-standard package**.

For the first time, Event-Based Vision's light and efficient integration into existing system is made possible.

bit.ly/propheseeproducts

METAVISION® INTELLIGENCE

Introducing **Metavision® Intelligence suite**, the most comprehensive Event-Based Vision software toolkit to date.

Experience first hand the new performance standards set by Event-Based Vision by interacting with more than **35 algorithms, 30 filters, 16 code samples and 5 ready-to-use applications,** the industry's widest selection available to date.

SCAN TO LEARN MORE

bit.ly/Metavisionintelligence

more information: https://www.prophesee.ai/contact-us/

WHERE

Anywhere you need to assess the frequency of a phenomenon.

Metrology of vibrating components.

WHY

Since the Prophesee sensor is only active when there is a change in the pixel, the static background is not acquired and does not contribute to the increase of the bandwidth.

Only dynamic data is transmitted and among these dynamic pixels, only those with a periodic pattern contribute to the period map.

SCAN TO GET IN TOUCH

https://www.prophesee.ai/contact-us/

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