

French SME seeks embedded real-time object tracking technology for high-speed small-object detection under a commercial agreement with technical assistance

Summary

Profile type

Technology request

Company's country

France

POD reference

TRFR20260930028

Profile status

PUBLISHED

Type of partnership

Commercial agreement with technical assistance

Targeted countries

• All countries

Contact Person

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Term of validity

30 Sep 2026
30 Sep 2027

Last update

30 Sep 2026

General Information

Short summary

A French SME active in software development, computer vision and embedded systems is developing a low-cost multi-camera solution for real-time tracking of small, fast-moving objects. It seeks existing high-performance detection and tracking algorithms validated in comparable applications and deployable on embedded GPU platforms. The SME is looking for partners under a commercial agreement with technical assistance involving technology licensing, integration support and deployment optimisation.

Full description

A French SME specialised in software development, computer vision and embedded systems is developing a distributed multi-camera solution designed to track small, fast-moving objects in real time. The system targets edge-based processing on low-power embedded hardware, avoiding reliance on cloud computing or centralised servers. Many existing object-tracking solutions achieve high performance through powerful computing infrastructures or centralised processing. However, deploying similar capabilities directly on embedded hardware remains challenging, particularly when tracking very small objects moving at high speed and when operating at high frame rates. The company is therefore assessing whether suitable technologies already exist on the market before committing additional internal research and development resources.

The requested technology is a real-time detection and tracking algorithm capable of identifying and following small, fast-moving objects in individual camera streams. The expected solution should operate at frame rates between 160 and 200 frames per second and be deployable on low-cost embedded GPU platforms comparable to the NVIDIA Jetson Orin Nano Super class. The solution should support standard machine learning deployment workflows, including conversion and optimisation for embedded inference environments. Robustness against motion blur, small object size and dynamic backgrounds is particularly important.

Although not mandatory, technologies offering additional capabilities such as multi-camera data fusion and real-time 3D trajectory reconstruction from synchronised camera views are also of interest. These capabilities could broaden the scope of future developments and applications.

Potential application areas include sports technology, robotics, industrial inspection and quality control, as well as other sectors requiring accurate tracking of high-speed objects. The project is currently under development, with internal work already underway on a proprietary tracking pipeline.

The main value for end users would be the possibility to achieve high-speed tracking performance directly on embedded platforms while reducing infrastructure costs, power consumption and system complexity compared with server-based architectures.

Integrating an already validated technology could significantly reduce development time and technical risks. The SME is therefore seeking a commercial agreement that includes technical assistance. The preferred outcome is the licensing of an existing algorithm or model combined with technical support for adaptation to the SME's specific hardware environment, including embedded deployment optimisation, model conversion and performance tuning. International cooperation would be implemented through technology transfer activities, integration support, technical exchanges and performance validation on the target platform.

Advantages and innovations

Technical specification or expertise sought

The expected technology should meet the following requirements:

- Real-time detection and 2D tracking of a small, fast-moving object within each camera view, using single-view, per-node processing, validated at frame rates between 160 and 200 fps.
- Deployable on a low-cost embedded GPU platform comparable to the NVIDIA Jetson Orin Nano Super class. This reference platform is provided as an indication of the target computing environment rather than a fixed requirement. Solutions should run on CPU and GPU resources only, using technologies such as CUDA and TensorRT.
- Compatible with real-time operation at the target frame rate and low end-to-end latency. Hard deterministic timing guarantees are not required; soft real-time performance is considered sufficient at this stage.
- Robust to motion blur, small object size and cluttered or dynamic backgrounds.
- Exportable through standard machine learning deployment pipelines, including PyTorch, ONNX and TensorRT.
- Previous validation in comparable high-speed small-object tracking applications, such as sports technology, robotics, industrial inspection or ballistics, would be an advantage but is not mandatory.
- As a secondary point of interest, technologies that already incorporate multi-camera fusion and real-time 3D trajectory reconstruction from synchronised 2D detections are welcome. These capabilities are not required but could broaden the scope of the cooperation beyond single-view 2D tracking.

Stage of development

Already on the market

IPR Status

No IPR applied

IPR Notes

Sustainable Development goals

• **Not relevant**

Partner Sought

Expected role of the partner

The partner should provide access, through licensing, to an existing real-time detection and tracking algorithm or model that matches the required technical specifications. The technology should support the detection and 2D tracking of small, fast-moving objects in high-frame-rate environments.

The partner is expected to assist with the technical integration of the solution into the SME's embedded multi-camera architecture, including adaptation to the target hardware environment and support for edge deployment

optimisation where relevant, such as model conversion, TensorRT optimisation and quantisation. Partners should have demonstrated expertise in computer vision and high-speed object tracking applications. Benchmarking data, performance metrics or validation results from comparable use cases, such as sports technology, robotics, industrial inspection or ballistics, would be valuable to assess suitability but are not mandatory. Technologies that already include multi-camera fusion and real-time 3D trajectory reconstruction capabilities are also of interest. While these features are not required, they could broaden the scope of the cooperation beyond single-view 2D tracking.

Type of Partner Sought

- SMEs, larger companies, R&D organisations or universities.
- Organisations active in computer vision, embedded artificial intelligence, machine learning, robotics, industrial inspection systems, sports technology or related digital technologies.
- Technology providers with proven expertise in real-time object detection and tracking solutions.

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

- **SME 50 - 249**
- **R&D Institution**
- **Big company**
- **SME <=10**
- **SME 11-49**
- **Other**
- **University**

Dissemination

Technology keywords

- **01003013 - Information Technology/Informatics**
- **01003016 - Simulation**
- **01003006 - Computer Software**
- **01003012 - Imaging, Image Processing, Pattern Recognition**

Targeted countries

- **All countries**

Market keywords

- **02007024 - Programming services/systems engineering**

Sector groups involved

- **Digital**