

SPOTNZOOM

BY DOLPHIO

Clearer vision. Better security.



DOLPHIO TECHNOLOGIES

Dolphio Technologies is a Budapest based Hungarian company founded in 2004 by Zsolt Robotka and János Rovnyai. We have 90 in our team, with 60 programmers.

At Dolphio, we provide state-of-the art solutions for all our partners. We offer a whole range of innovative, marketable and affordable solutions, but our key area of expertise is computer vision and SpotNzoom is our flagship product.

We are determined to become Central Europe's leading technology provider with the capacity to contribute to Europe's proud legacy of scientific innovation. For proof, look no further than the fact that Dolphio has been ranked top of Deloitte's Fast Technologies 50 CEE four years running. This shows we're heading in the right direction.

OUR AWARDS:



COMPETENCIES – LANGUAGES, PLATFORMS AND OPERATING SYSTEMS:

PHP | JAVASCRIPT | CSS3 | J2SE | SQL – PL/SQL | NVIDIA CUDA | C# | HTML 5
C++ | C++1 | MATLAB | PYTHON | ACTIONSRIPT | PERL | BASH | J2EE | JAVA

SERVER | DESKTOP | EMBEDDED | DESKTOP WINDOWS | DESKTOP LINUX
ANDROID | LINUX | ARM APP PROCESSORS | TI OMAP/DAVINCI | IOS | MOBILE

FOUNDERS



Zsolt Robotka

CEO & Founder

Zsolt Robotka graduated with an MSc in Applied Mathematics. Ever since he can remember he was fascinated by how theoretical algorithms can help to solve real-world problems. As a kid he was obsessed with the statistical probabilities of dice throwing and he enjoyed using his skill with numbers to predict the results of sports competitions. When he got his first Commodore 64, he immediately began game programming.



János Rovnyai

CEO & Founder

So far, János Rovnyai's life has involved constantly setting himself new challenges. He always had big plans for the future and decided while still very young to become an economist. Early in his career, he decided he wanted to run his own business, and so ten years ago, Dolphio was born.

SECURITY SURVEILLANCE SYSTEMS – THE PROBLEMS

Although surveillance systems can scan extensive areas, they are incapable of recording images that are sharp enough to identify people or vehicles. The reason for this problem is the trade-off between offering a thorough scan of a larger area yet simultaneously providing high-definition images of faces and licence-plate numbers.

- Box/CCTV cameras are fixed and can cover larger areas. They are good at providing a general overview of the situation but their resolution isn't sharp enough to clearly identify faces and number-plates.
- PTZ (pan-tilt-zoom) cameras can zoom and record high definition footage that's good enough to provide clear identification but they're incapable of giving a proper overview of a more extensive area.

The problem is that the different camera types work independently of each other and you have to factor in a human dimension in the process of recognizing and recording critical events.



SPOTNZoom – THE INTELLIGENT SURVEILLANCE SYSTEM

AN INTELLIGENT SOLUTION IS NEEDED

SpotNzoom solves all these problems. Its cameras and server work together to cover extensive areas and to capture high definition images of people and cars using CCTV and PTZ cameras that are integrated into the overall security surveillance system.

SpotNzoom's software automatically distinguishes people from vehicles. The controller of a SpotNzoom system can also establish parameters within the surveillance areas like setting free-to-enter and prohibited zones, or priorities in detection (i.e. people first then vehicles). Moreover the system can follow people across all the different zones they pass through, until its zooming cameras are re-directed onto other objects according to the pre-programmed priority settings.



HIGH DEFINITION,
CLEAR IMAGES
OF EVERY PERSON
AND EVERY CAR.

THE WORKING PROCESS OF SPOTNZoom:

- 1** It provides an overview of the area under surveillance.
- 2** Objects are picked out with computer vision.
- 3** The PTZ is directed on target.
- 4** It aims at the target with a 20x optical zoom.
- 5** It starts following and recording.
- 6** It switches to the closest target according to the server's command.
- 7** It keeps an eye on everything else while the PTZs do their work.
- 8** It detects complex events, sends automated alerts.

SPOTTING OUT. ZOOMING IN. CAPTURING FOOTAGE. ALERT!



SPOTN ZOOM PRO

WHEN MORE COMPLEX FUNCTIONS ARE REQUIRED.

SpotNzoom Pro offers additional intelligent functions, for example traffic monitoring. It detects speeding, driving in the wrong direction and other traffic infringements like crossing the line, parking in or driving through prohibited areas. SpotNzoom Pro is also able to send alerts via e-mail, sms, push notification, etc.



| | | |
|--|---|---|
| Definition of area of interest | ✓ | ✓ |
| Restricted area selection | ✓ | ✓ |
| Time-sensitive settings (alerting only after 10 pm i.e.) | ✓ | ✓ |
| Sending automated alerts and reports in sms/email | | ✓ |
| Face/number plate detection | | ✓ |
| Detect-only rules (i.e. people/vehicle) | | ✓ |
| Other personalized functions | | ✓ |



WHAT'S THE MAIN BENEFIT FOR YOU?

With SpotNzoom, the object is picked out with computer vision by box cameras, then PTZ is immediately directed onto it, recording high-definition footage.

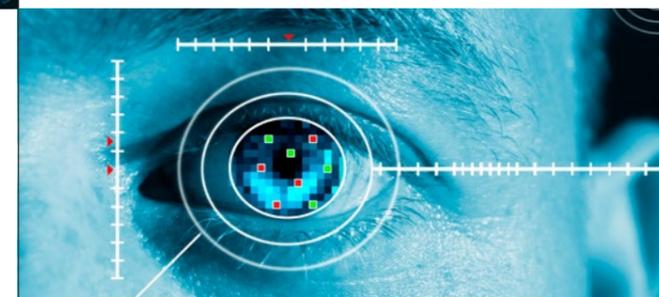
The box cameras continuously record and analyse the whole territory so no one can hide. SpotNzoom exceeds the security level of general surveillance systems using fewer devices. That means **less infrastructure** and two times **less data** to transfer and store when covering the same area.

If more than one object is detected then the PTZ switches between them according to the optimization algorithm, which is optimized not to miss any object – there is **no human dimension to get in the way**.



That means fewer mistakes and lower costs!

Based on previous SpotNzoom projects, you could save between **15-40%** as well as benefitting from higher-quality images and increased security.





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Technologies

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