MOBILE DEVICE FOR REAL-TIME LICENSE PLATE RECOGNITION WITHOUT INTERNET CONNECTION

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RESUMEN

The **Lucentia** research group at the University of Alicante has developed a device to be installed in a vehicle and **recognize Persian license plates in motion** by means of image processing. The novelty lies in the ability to perform this process completely autonomously in **real time**, with **minimal power consumption** and **without being connected to the Internet**.

The group is looking for companies interested in acquiring this technology for commercial exploitation or in its development to adapt it to license plates with Western characters.

VENTAJAS Y ASPECTOS INNOVADORES

MAIN ADVANTAGES OF THE TECHNOLOGY

The main advantages of this technology are as follows:

- The device is able to perform recognition with a **variable angle**, both horizontally and vertically.
- The developed method allows efficient recognition of license plates even in **adverse lighting conditions** such as low illumination, dust and rain, foreign elements on the license plate or fog.
- The ability to select the license plate of interest, taking into account that several cars may appear in the same scene, allows **reducing the computation and storage cost**.
- **Efficiency level higher than 90%**.
- The method is specifically designed for license plates with **Persian characters** of great complexity due to their typographic elements, in addition to recognizing **special symbols**, such as those intended to identify people with reduced mobility, special vehicles or cabs. Additionally, the invention also allows handling different **types of colors**, which are used for protocol, public or private vehicles.
- The technology would be **easily adaptable** to other types of license plates with **Western** or other **characters**.

INNOVATIVE ASPECTS

- Persian character-based license plate detection from a mobile device that operates autonomously **in real time**.
- **Without** the need to be connected to a **communications network or the Internet**.
- With **low power consumption**, making it suitable for use in mobile devices.
- The recognition method is based on several optimizations in the **artificial intelligence** models it uses, to take advantage of the device's hardware accelerators, i.e. its processor and graphics unit.

APLICACIONES DE LA OFERTA

It is mainly aimed at the **Transport** sector, although it can be applied to any sector that requires license plate recognition to control the entry or

exit of goods or vehicles.

COLABORACIÓN BUSCADA

We are looking for companies interested in acquiring this technology for **commercial exploitation** through patent license agreements or for the **development of the technology** and its adaptation to license plates in other countries.