

Parrot AR.Drone project, When video games become reality...

Parrot AR.Drone, the first quadricopter using augmented reality and piloted by Wi-Fi.



Parrot, leader in wireless peripherals for mobile phones, is unveiling **the first quadricopter using augmented reality: Parrot AR.Drone.**

With a very intuitive mobility-and universal accessibility, Parrot AR.Drone is piloted initially with an iPhone™ or iPod touch® and allows you to take a spectacular flying journey. In addition to the pure pleasure of flying, this unique quadricopter enables to recreate **a large number of video games** in the real world.

Streaming video on the iPhone™ or iPod touch® screen enables you to pilot the AR.Drone as if you were sitting in the pilot's seat; the image processing allows to integrate real-time special effects of augmented reality...

“Parrot AR.Drone” project

The idea of the Parrot AR.Drone project is to create a performing quadricopter with the best of today’s technologies in order to enter universes that are not yet explored, mixing video games and the real world. This is augmented reality.

“Imagine... you are piloting a drone... thanks to video streaming on the screen of your iPhone™, you are really seating in the pilot’s seat... You are peacefully flying in your garden... Suddenly, a monster crops up from the ground, just in front of you... it is shooting at you... you need to escape from it and to neutralize it... only your piloting skills will enable you to bail yourself out...”

Parrot AR.Drone: create dreams

“At Parrot, we have been developing wireless concepts for video games for 4 years. Our first project was a Bluetooth race car. We’ve developed it, but I was not satisfied. A video game should contain a part of dream that I missed with the Bluetooth car,” explains Henri Seydoux, founder and CEO of Parrot. *“It should fly! So I started with the idea of a quadricopter. With video cameras and a powerful computer, we have developed a very stable drone that is easy to control and flies like a dragon-fly.”*

Parrot AR.Drone is the outcome of a dream: to invent a high-tech drone for kids and adults, in developing a new concept of video gaming using augmented reality. It is initially designed for iPhone™ and iPod touch®.

Parrot AR.Drone: a cutting-edge video quadricopter

Parrot AR.Drone is composed of a central cockpit which is surrounded by 4 propellers, each of them being driven by an engine. It offers amazing possibilities for piloting, excellent maneuverability and extraordinary stability.



The heart of AR.Drone contains all electronic components and **two cameras**:

- **The first camera**, under the structure, is connected to an Inertial Measurement Unit. Thanks to this unit, the AR.Drone is capable of measuring its speed and performing mind-blowing stationary flights. *PSP (Parrot Smart Piloting)* technology also compensates turbulences due to the wind during outside flights. These technologies are usually used for professional and military applications, but have been adapted to gaming universe for the first time.

The second camera, at the front of the quadricopter, broadcasts and streams on the iPhone™ or iPod touch® screen; what the drone is seeing as if the player was in the pilot’s position. It plays a major role for video gaming, thanks to the use of augmented reality.

Parrot AR.Drone: an intuitive piloting

The **Parrot AR.Drone is generating its own Wi-Fi network** at which you simply need to connect an iPhone™ or iPod touch® to turn it into a true piloting station.

An unseen mix of captors (wide angle camera and high speed camera, MEMS (*Micro Electro Mechanicals Systems*), 3 axes accelerometer, 3 axes gyro, ultrasound sensor) associated with a powerful computer make the piloting easy and accessible even for the youngest or non technologically savvy.

Thanks to the accelerometer of the iPhone™ or iPod touch® that is detecting user's movements, the AR.Drone is very easy to pilot by leaning the iPhone™ forward to move forward or sideways to corner or change direction.

On the touch pad of the iPhone™, command buttons also indicate some actions such as rise, down, rotate, move back, move forward... Observing the AR.Drone obey each movement of his hands is an extraordinary experience for the player.



Parrot AR.Drone: imagination has no limits

Parrot AR.Drone is designed for flying **inside** and **outside**.

For a flight inside, a hull surrounds the propellers and protects the quadricopter if it hits an obstacle. For the outside, a shaped hull reduces the area to the wind for a better maneuverability of the quadricopter.

Each flight with the AR.Drone will always be a new experience. Outside, the player will have to take into account the changing elements of the real environment, like the wind, the sunshine, the shading areas or any obstacles that appear.

Parrot AR.Drone is also offering **an unprecedented multi-player possibility**.

Thanks to augmented reality, it is possible to recreate an aerial fight between two quadricopters. The worlds of video gaming and radio controlled models collaborate for the first time evolving simultaneously in both universes!



Parrot AR.Drone: an open development platform

Parrot intends to extend the possibilities of AR.Drone so the project is a **development platform opened to game developers**.

A **Software Development Kit (SDK)** is today available for the developers who would wish to create games for the AR.Drone by using the techniques of augmented reality enabled by the frontal camera. Developers just need to register on www.ardrone.org to download the SDK and contribute to **the AR.Drone Open API platform**.

Development kits, including a prototype of the drone, available soon, will be subject to acceptance of development projects by Parrot.

With AR.Drone, all kind of games can be created: shooting, adventure, races, arcade...

Parrot AR.Drone: a technological first

For the first time, a consumer product encompasses:

- A quadcopter made in carbon fiber and high resistance PA66 plastic
- MEMS (Micro-Electro-Mechanical Systems) and video processing to ensure a very intuitive piloting of a radio controlled object
- Wi-Fi and video streaming for a modern interface with an iPhone™ or iPod touch®
- Images processing software for augmented reality

Parrot has worked for 15 years on wireless technologies. Engineering is the keystone of the work of Parrot and the R&D department of the company consists of 150 engineers.

Parrot concentrates on the maintenance of its investments in R&D to a high level, with an important focus on the software and the signal processing. Parrot develops complete products in taking care of their use; because of this, software, electronics, design and also manufacturing costs are the daily work of the research department.

Note:

- Parrot AR.Drone is today open to video games developers.
- The quadricopter should be available for consumer in 2010.
- A dedicated website will also enable owners of AR.Drone to be part of the AR.Drone community and to share their videos...

About Parrot

Parrot, a global leader in wireless devices for mobile phones, stands on the cutting edge of innovation. The company was founded in 1994 by Henri Seydoux as part of his determination to drive the inevitable breakthrough of mobile phones into everyday life by creating high-quality, user-friendly wireless devices for easy living. Parrot has developed the most extensive range of hands-free systems on the market for cars, motorbikes and scooters, including wireless multimedia products geared towards audiovisual applications. In 2008, Parrot launched a new prestige line of high-end products bearing the hallmark of renowned artists. Parrot, headquartered in Paris, currently employs 450 people worldwide and generates 85% of its sales overseas.

www.parrot.com

Euronext Paris – Eurolist C: FR0004038263 – PARROT

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For more information, visit www.parrot.com or contact:

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