

Fabrice Blanc

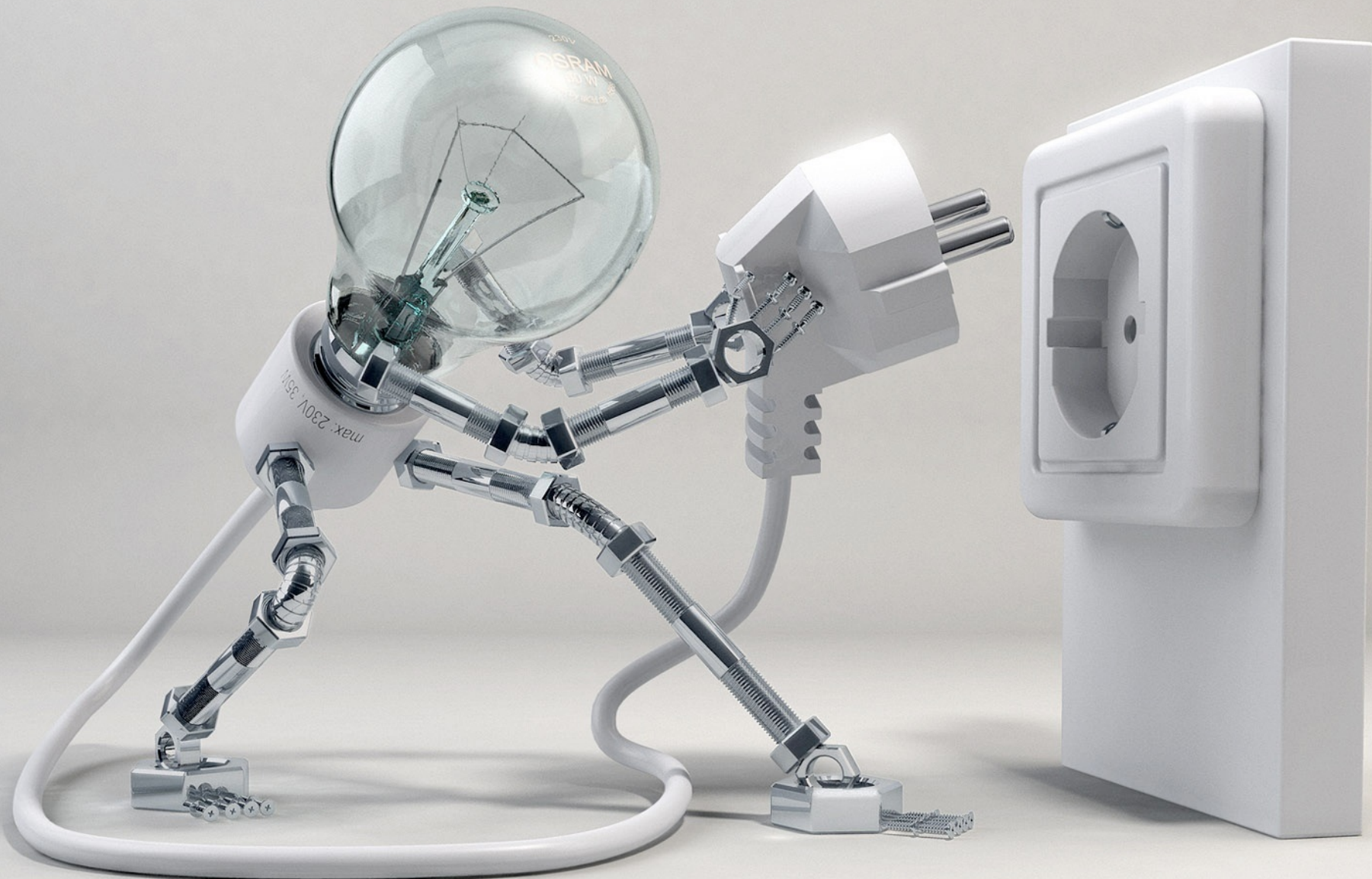
Portfolio



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About me

A product is the materialization of an idea. Whatever the origin of this idea, if your task is to transform it into a real product, it requires commitment and sacrifices. This creative process may be compared to gestation, you cannot simply forget it when you leave your office, it occupies your mind until delivery. Giving birth to a product is an adventure, alone or with a team, you always leave a part of yourself inside.

A consumer electronics product is a subtle synergy between marketing, electronics, mechanics and software in order to succeed in a competitive market. The success of your product depends on how quickly you solve this complex equation to meet the market demand. It requires a multi-disciplinary approach from creation through production.

The industrialization process can be fastidious and costly if the product was engineered without production issues and obstacles in mind. Experience is the main asset here, the more products you create, the more traps you avoid. Molds, component shortages, laboratories certifications, quality failures, logistics etc. All these aspects can be fatal when speed to market is critical.

Creating consumer electronics products has been my passion for many years. From automotive electronic accessories to golf club sensors, I have created products that have sold in millions.

I started electronics at thirteen and at seventeen and I created my first commercial software for a civil engineering company. I continued a scientific and technical education until I became an engineer specializing in electronics. I worked for the military industry where I got several patents in electromagnetism until 1999. It is then that I focused my activity on creating consumer electronics for various companies in Europe and Asia, where I also participated in setting up a factory and an engineering team in order to manufacture my products.

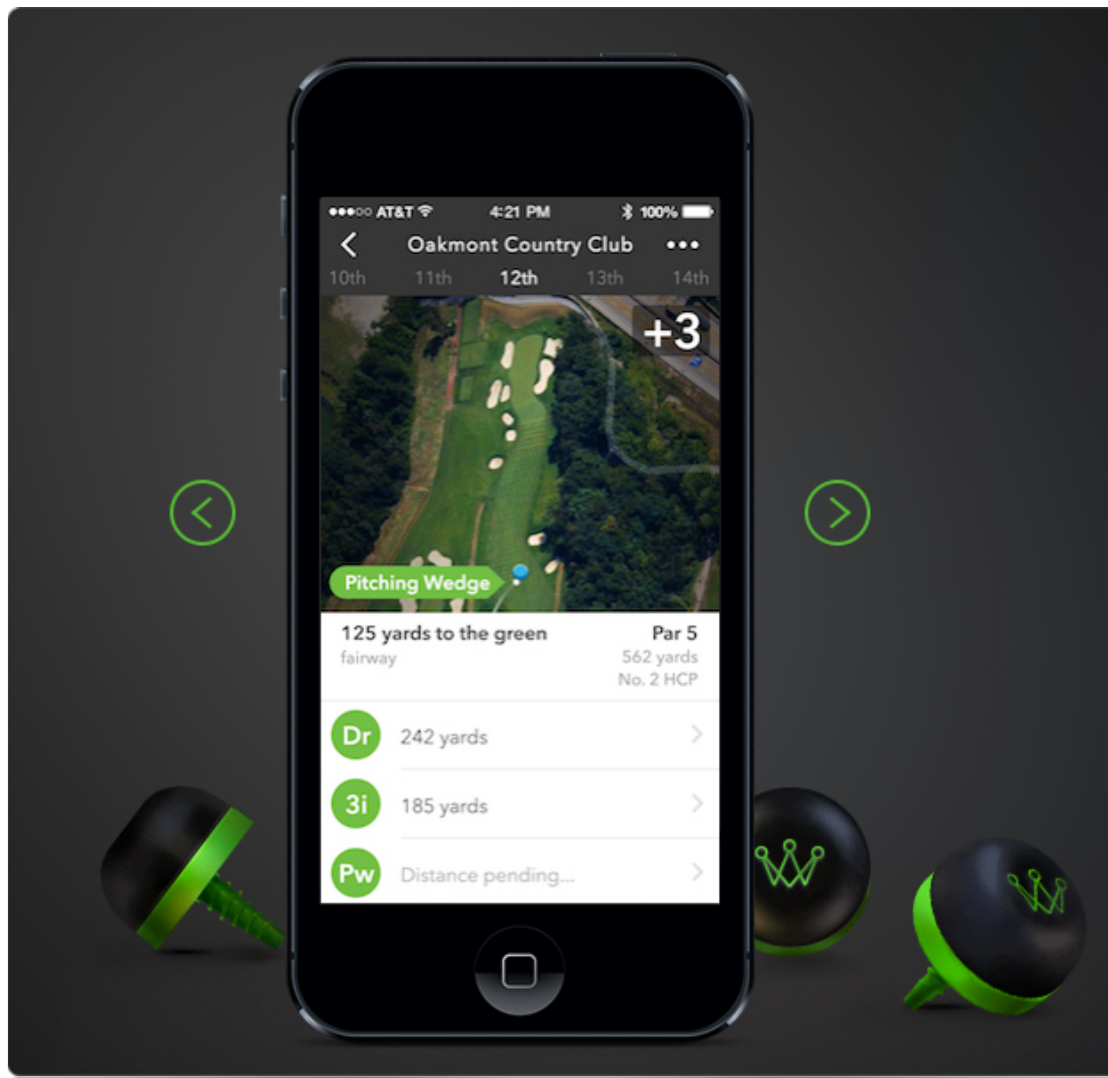
From research to industrialization, solving problems is my life. Transforming ideas into real products is my passion.

Fabrice.

2014

Arccos Golf

Golf's first real-time automatic stat tracking platform



Description

Arccos is a set of 14 sensors that user can attach to the grip end of his clubs. Using the new Bluetooth 4.0 radio standard, sensors communicate with user's iPhone to map shot locations during the game in order to build stats for each club. Arccos automatically tracks every shot, every distance and every hole on user's iPhone without the need to take any additional steps.

Brand:	ARCCOS GOLF
Market:	USA
Retail price:	399 USD

My contribution

Research, shots detection algorithms, electronic design, firmware, technical team management, production.

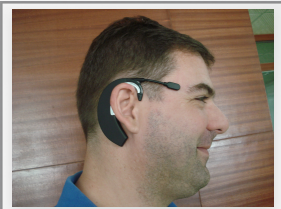


USA advertisement

2013

BW01

World first EEG wearable device for road safety



Description

BW01 is the first wearable anti-drowsiness system using driver's brain waves to detect drowsiness at the wheel. Using a micro EEG processor, it analyzes brain waves signals in order to detect driver sleepiness and warns him with audible alerts. Because it uses biological signals, it can prevent motorist sleepiness with high efficiency. A version has been studied for military helmets.

Brand: MITSUGAWA Ltd

My contribution

Original idea, financing, electronic design, mechanical design, firmware.

 Patented in China (PCT)

2012

SK08

Wireless GPS digital speedometer and speed-traps warning system



Description

SK08 uses GPS satellites system to compute accurate vehicle speed and vehicle location. It compares the current vehicle speed, direction, location with an embedded database including speed-traps locations, directions, legal speed limitation in order to warn driver about excessive speed.

Brand:	MITSUGAWA Ltd
Units sold:	30 000
Market:	France
Distributed by:	TF1, SPEEDOFLASH
Retail price:	59 Euros

My contribution

Original idea, financing, electronic design, mechanical design, firmware, production setup in China, end user PC and MAC software.

SKo8 has been created in a pragmatic way to be handy with a minimum of buttons and an easy vehicle vent mount.

Electronics and internal firmware have been engineered to provide a stunning 22 hours battery life on road despite continuous display and GPS chip use. (Competitors products battery life is about 3 to 4 hours)

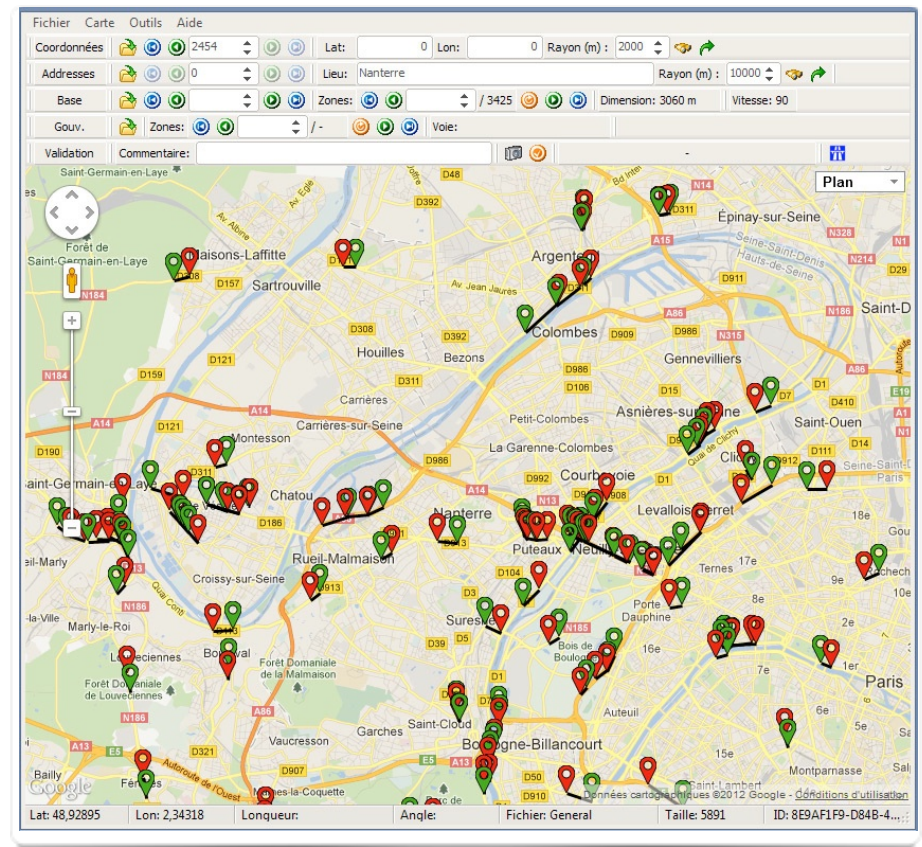
I created an ultra fast vector detection engine directly inside GPS chip in order to reduce components bill. This piece of embedded software shares GPS chip calculation strength without altering the satellites reception and treatment. Then SKo8 was the first device to comply with new 2012 European laws for the road safety.

SKo8 internal “target” detection firmware must access a preprocessed geographical vector database contained inside its flash memory. In order to create this geographical database, I created a special software mixing Google map technology and numerous spatial mathematical calculations. This software combines several technologies including encryption of data, graphical overlay coding, geographical data sorting and encoding, driving simulation etc.

This software reduced the usual time spent on database creation for this kind of device by a factor 30.

More than 7000 warning areas have been manually generated, tested and archived thanks to this software saving thousands of labor hours.

Geo vector database management software:



Device design, all software designs and tests have been created in three months. SKo8 has been shown to the press in early 2012 and has been a top seller in french TV shopping during one year.

2011

ELP 01

European low profile high density wall mounted USB charger



Description

ELP01 is a 1A USB wall charger with a very low profile casing which fits perfectly European wall sockets. I created it to avoid the proliferation of heterogeneous USB chargers coming with phones, cameras, mp3 players etc. Presented in CEBIT show in 2011 it was immediately successful in Germany, Austria and Switzerland.

Brand:	MITSUGAWA Ltd
Units sold:	100 000
Market:	Europe
Distributed by:	TELEFUNKEN gmbh
Retail price:	19 Euros

My contribution

Original idea, electronic design, mechanical design.

 Patented in China

2011

ULP 01

British low profile high density wall mounted 2 . 1 A USB charger



Description

ULP01 has been presented to the public in 2011 during the Hannover Cebit show. This low profile 2.1 A dual USB wall charger has been created in order to reduce the electrical mess from wires at home or in office.

Brand:	MITSUGAWA Ltd
Units sold:	50 000
Market:	UK
Distributed by:	MAPLIN Ltd
Retail price:	9.9 GBP

My contribution

Original idea, mechanical design.

 Patented in China

2010

CA5521

World first miniature 2 . 1 A dual USB car charger



Description

CA5521 is a dual ports USB car charger. It has been the first miniature 2.1 A USB car charger on the market. It can charge an iPad as well as two iPhone at the same time. It embeds electronic fuse and thermal protection.

This product has passed E-Mark certification and has been qualified by BMW.

Brand:	MITSUGAWA Ltd
Units sold:	> 500 000
Market:	Europe
Distributed by:	BMW
Retail price:	19 Euros

My contribution

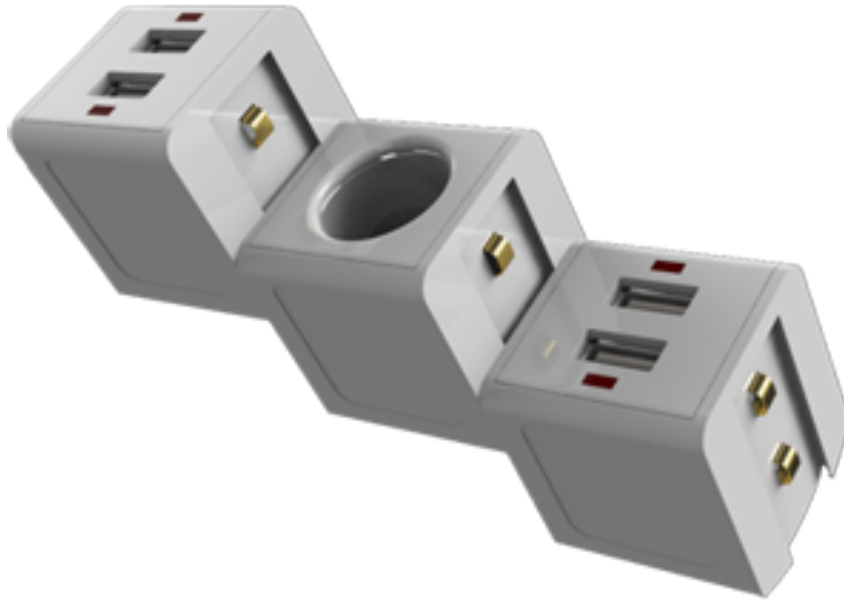
Original idea, electronic design, mechanical design.

 Patented in China

2010

CA800

Modular USB car charger



Description

CA800 is a modular design and can be easily assembled by the customer. Each module is independent and can snap together. There is different kinds of modules, some are USB car chargers, other are some cigar lighter socket extension. Each module can be sold separately so customer can decide how to expand his installation depending on his needs.

Brand:	MITSUGAWA Ltd
Units sold:	5 000
Market:	Europe
Distributed by:	HAMA
Retail price:	19 Euros

My contribution

Original idea, mechanical design.



Patented in China

2009

INFORAD V6/K₅

GPS speed traps warning system with voice alerts



Description

V6 is a speed-camera warning system using GPS technology. This design integrates three microprocessors and voice alerts.

V6 embeds a Li-ion polymer battery with a 5 to 6 hours battery life on road. Internal target detection engine has been created to handle more than 200 000 targets locations. Special mathematics algorithms have been implemented to avoid false alarms.

Brand:	INFORAD Ltd
Units sold:	112 000
Market:	France/Spain
Distributed by:	CARREFOUR etc.
Retail price:	99 Euros

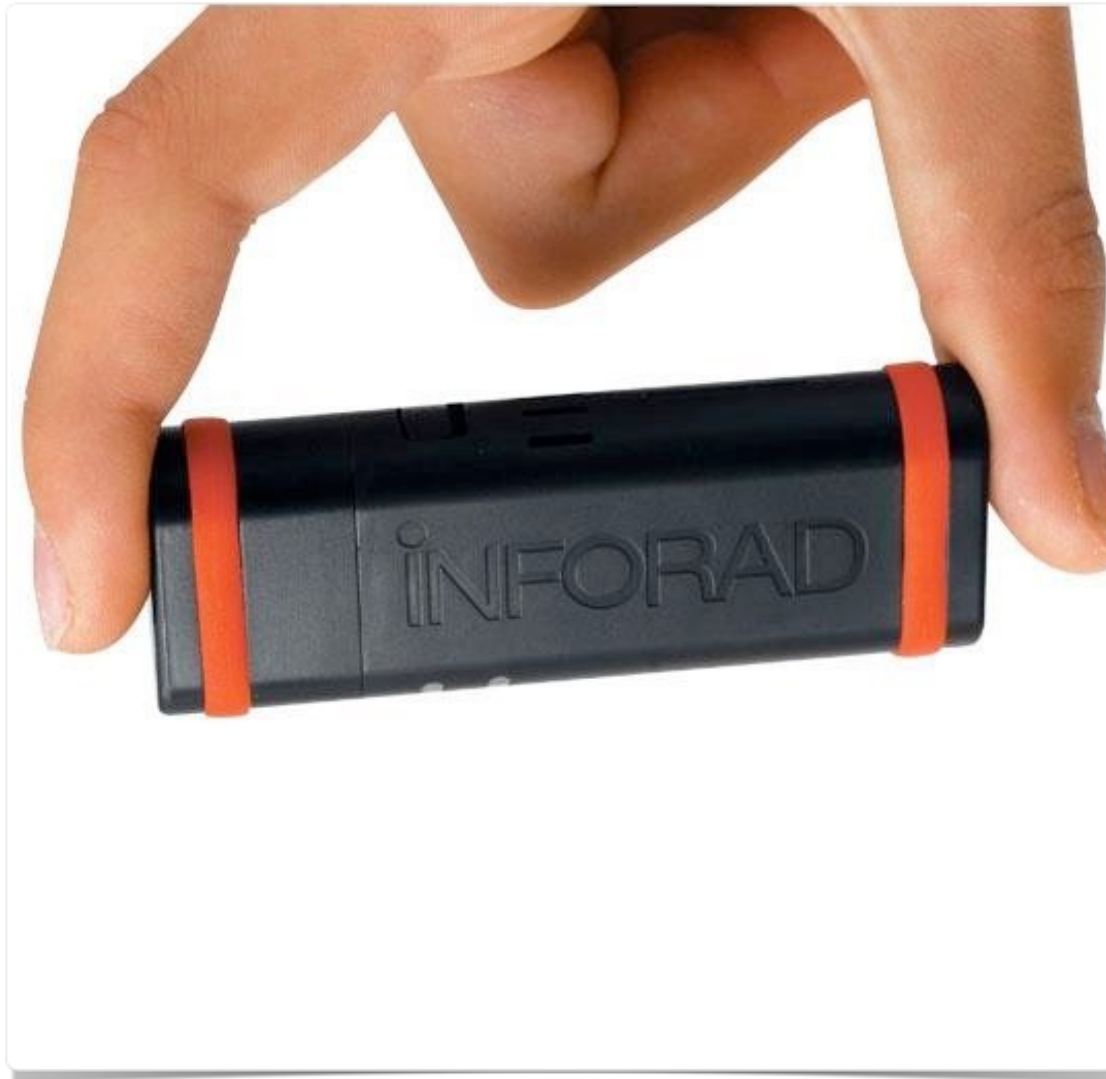
My contribution

Electronic design, firmware, production setup in China, end user PC software.

2008

INFORAD K1

World smallest GPS speed traps warning system



Description

K1 is the smallest and cheapest GPS speed-trap warning system in the world. Its original and handy design is the main reason for its huge success in western Europe.

Brand:	INFORAD Ltd
Units sold:	700 000
Market:	Europe
Distributed by:	CARREFOUR etc.
Retail price:	59 Euros

My contribution

Original idea, electronic design, firmware, mechanical design, production setup in China, end user PC software.



[French review](#)



[UK advertisement](#)

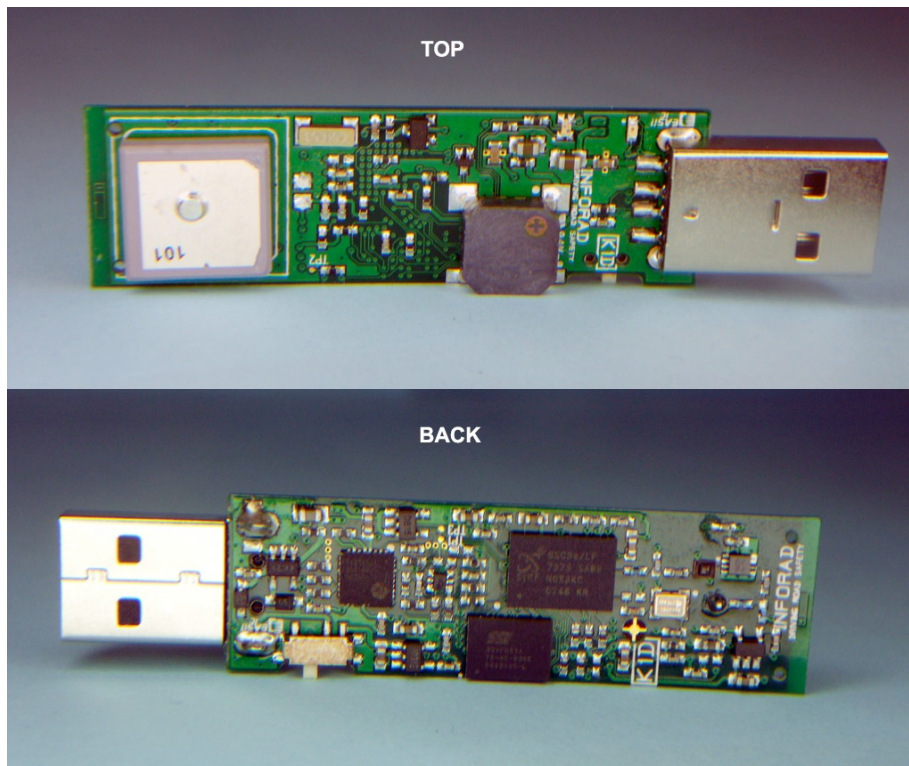


[Reviews on Amazon UK](#)

The K1 was created to stop the emerging Korean competitors by proposing a completely new and original design.

Cost and efficiency were key to stop any desire from asian competitors. One year after K1 official press presentation in Paris, no more asian competitor remained on the European market.

K1 was a real performer in terms of technology and design compared to its cost. With the size of a standard USB key, it embedded a Li-ion battery, sound alerter, GPS antenna and chipset, USB communication bridge and power management components.



Several cosmetic improvements have been made after the first version and Kx products remained top-seller in the market for more than 3 years.

2006

INFORAD M1

Rugged GPS speed cameras warning system for motorcycles



Description

M1 is a motorcycle version of a GPS speed-trap warning system. It was designed to be installed on motorcycles by professionals. Discrete, water-proof, oil-proof, vibration and impact resistant, I created this product the same way I made military products in the past.

Brand:	INFORAD Ltd
Units sold:	30 000
Market:	Europe/UK
Distributed by:	FEU VERT, COBRA ...
Retail price:	99 Euros (2006)

My contribution

Original idea, electronic design, firmware, mechanical design, production setup in China.



[Reviews on Amazon UK](#)

2006

CA 40

World first miniature USB car charger



Description

In 2006, USB car chargers manufactured in China, were big, ugly and used 80's technology. I decided to create a miniature USB car charger based on surface mount technology improving the dashboards profile and look by using a retractable chrome plated handle. Its quick success was beyond expectations.

Brand:	SUNKIN Ltd
Units sold:	> 1 500 000
Market:	Europe
Distributed by:	FIAT, HAMA etc.
Retail price:	9.9 Euros

My contribution

Original idea, electronic design, mechanical design.

IP Patented in China/Europe

2005

INFORAD V3/V4

Advanced GPS speed cameras detection system



Description

V3 is a GPS powered speed-camera warning system. I created this version as an evolution of the first version I created in 2004. This version uses two microprocessors and one USB bridge inside the power supply cable.

Brand:	INFORAD Ltd
Units sold:	600 000
Market:	Europe
Distributed by:	CARREFOUR ...
Retail price:	99 Euros

My contribution

Original idea, electronic design, firmware, mechanical design, production setup in China, end user PC software.



Inforad V3 is also known as GPS Angel in USA



[USA review](#)

2004

INFORAD V1/V2

GPS speed cameras detection system



Description

V1 was the very first GPS speed-camera detection system created in Continental Europe. Due to the strict European legislation, it was forbidden to detect radars radio waves in order to warn motorists, so I invented a system using GPS and an embedded speed-camera location database for real time comparisons to warn driver when necessary.

Brand:	INFORAD Ltd
Units sold:	460 000
Market:	Europe
Distributed by:	AUTOBACS, etc.
Retail price:	99 Euros

My contribution

Electronic design, target identification algorithms, firmware, end user PC software, production setup in China.

2001

SYPOD

Multimedia Portable Assistant



Description

Sypod was one of the first multimedia tactile pocket players in the world.

Based on an original design and an embedded Linux distribution, it has been the first DIVX player offering a high quality stereo sound and a 25 FPS video rate with 65 000 colors.

Sypod has been shown in Linux expo in Paris and Madrid

Brand: BAHIA 21 Corp.
Market: Europe/USA

My contribution

Original idea, electronic design, mechanical design, software team management (20 engineers)

 3 patents in France

At the end of year 2000 I was approached by investors who asked me to find an idea for PDA (Personal Digital Assistant) market. After some market investigations, I knew that PDA world was saturated by major consumer electronics companies (HP, SAMSUNG, SONY) and proposed to target another market segment with a concept I called MPA (Multimedia Personal Assistant) This concept was innovative and well received.

The device was completely different from what was existing in the market, I worked in collaboration with Philippe Stark agency in Paris to create an original luxurious design. I focused on brand new multimedia features as TV output, Line in sockets etc...

I also wanted a completely new interface, different from current style widely used for PDA (Windows CE, Palm, etc.) For this purpose I have created a composite team of skilled software engineers and graphic designers. The team was organized into task groups in order to achieve my vision of the product.

We used a Linux kernel and we created a completely new user interface and multimedia applications. The applications were skin-able and we created a SDK called BTK (Bahia Tool Kit) in order to increase the software development rate.

We were the first to expose a stereo, 65K colors, 25 fps divx player and I patented a complete new way of approaching application browsing by sliding applications from everywhere on the tactile skin like today's iPhone or Android.

After the eleventh of September 2001, a different orientation has been decided for this product and it has been reconverted into a wearable security equipment.



This equipment has been presented to some members of the american congress in 2002.

Finally, it has been used as a wearable wireless user interface for airport handheld explosive detector (MO-2M) and portable X-Ray inspection system (SXR-150)

2000

SURFCLEANER

PC Software (CDROM)



Description

Surfcleaner is a PC utility software I created in order to wipe out internet browsing tracks and protect user privacy.

This software has been sold in France as a boxed edition in multimedia shops like Hypermedia, Leclerc, FNAC and Auchan.

Brand:	ORA CREATIVE
Units sold:	> 10 000
Market:	France
Distributed by:	HYPERMEDIA, FNAC
Retail price:	19 Euros

My contribution

Original idea, coding, UI.

1999

NETFLOW

PC Software (CDROM)



Description

Netflow was a PC utility software created to aggregate multiple internet downloads at same time in order to decrease downloading time for big files. This software was able to manage HTTP and FTP protocols.

This software has been sold over Europe as a boxed edition in multimedia shops like Hyper-Media, Carrefour, Auchan, etc.

Brand:	ORA CREATIVE
Units sold:	> 10 000
Market:	France
Distributed by:	HYPERMEDIA
Retail price:	19 Euros

My contribution

Original idea, coding, UI.

1998

COMPTEUR INTERNET

PC Software (CDROM)



Description

In 1998 a large part of the European market accessed internet via telephone at a significant cost. I created a consumers software to manage internet time and automatically close the internet connection after configurable idle time or budget overrun.

This PC software used some system hooking in order to analyze RTC communications and take control of modem.

Brand:	ORA CREATIVE
Units sold:	> 30 000
Market:	Europe
Distributed by:	FNAC, SURCOUF ...
Retail price:	19 Euros (boxed)

My contribution

Original idea, coding, UI.

1998

SP 01

Smart mine-clearing probe



Description

After a war anti-personal land-mines are a disaster for countries. Today, mine clearance troops use a bayonet to probe ground inch per inch stopping at each stone.

In a pragmatic way, I created an affordable electronic bayonet using amagnetic material and using a miniature pulsed induction metal detection system fitted in the bayonet. This system decreases false alarms and improves land-mines clearance efficiency.

Brand:

THOMSON DAIMLER

Market:

France

My contribution

Original idea, research, electronic design.



Patented in France

1997

MATENIN

Land-mines burier vehicle automation



Description

This system was created to generate automatic land-mines field locations reports and to ease wartime land-mines field creation. I created a system that uses a mix of software and automation hardware with magneto-resistive technology, odometer and GPS.

Working in cooperation with Leica Geosystems in Switzerland for the sensors development, the system has been approved by the French army after field tests.

Brand: THOMSON
Market: French Army

My contribution

Electronic design, embedded software, militarized PC software and UI.

1997

HPD3

Electromagnetic target identification anti-tank land-mine



Description

This weapon is buried underground and embeds an electromagnetic sensor able to identify the target and fire it at its weakest point. This land-mine has a self destruction system in order to comply with Ottawa treaty.

When designing this kind of products you must keep in mind safety, reliability and long term maintenance.

I used aeronautical redundancy design in order to improve weapon's MTBF.

Brand:	THOMSON
Market:	Used by the French army

My contribution

Electromagnetic sensor, electronic design, firmware.

 Patented in France