



GLOBAL  
LiFi  
CONGRESS

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## PRESS RELEASE

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A background image featuring a blue globe with white network lines overlaid on it. Two hands are shown at the bottom, holding the globe. The overall theme is global connectivity and technology.

# Global LiFi Congress

## LiFi, a revolutionary technology



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PALAIS BRONGNIART

# Global LiFi Congress

*in a few words...*

## Challenges for the future:

- 75 billion devices connected by 2022
- 5G, WiFi, Bluetooth network saturation

## The solution: LiFi

1<sup>st</sup> ever international exhibition entirely dedicated to LiFi

Conferences / exhibitions / networking spaces



All of LiFi's international scientific and economic players

Europe : the international birthplace of LiFi

LiFi's scientific and economic leaders will be brought together to create a timeline, and determine the future of this new technology that will revolutionize the connectivity of IoTs (Internet of things).

The Global LiFi Congress® will take place on the 8<sup>th</sup> and 9<sup>th</sup> of February 2018 at the Palais Brongniart, close to some of the most beautiful Parisian areas and monuments.

Numerous business and scientific conferences, a trade show, a networking space and one to one meetings.

## ■ Our mission

To promote the technological revolution that is LiFi.

## ■ Our objective

Enabling all of the scientific and economic players to share their vision in terms of innovation and applications for LiFi.

## ■ Key figures

- First ever global event dedicated entirely to LiFi
- Numerous economic and scientific figures in attendance
- More than 20 conferences presented by the most renowned experts
- 5 continents represented

# LiFi : a technological revolution

*in a few words...*

## ■ LiFi ?

LiFi is a wireless communication technology based on the use of LED light.

WiFi uses radio waves on the electromagnetic spectrum whereas LiFi uses the optical spectrum to connect to the internet.

The principle of LiFi is based on the coding and sending of digital data through subtly varying the brightness of light sources.

Thanks to LiFi, an LED light can remotely transmit content (videos, messages, GPS...) to a computer, tablet or a smartphone.

## ■ The advantages

- Faster than traditional network access
- No electromagnetic wave
- Very precise GPS
- Eco-friendly
- Indoor connectivity (medical, aeronautical, defense...)
- Increased security
- No health risks
- Very economical (no license)

## ■ A few figures

- 100 times faster than WiFi
- Annual growth of 80% up to 2023
- Li-Fi Market : 2016 - \$0.5bn  
2023 - \$75bn
- LED bulbs flicker several million times per second



# The Global LiFi Congress

## ■ The event of the year for LiFi

The Global LiFi Congress® will take place on the 8<sup>th</sup> and 9<sup>th</sup> February 2018 at the Palais Brongniart, close to some of the most beautiful Parisian areas and monuments.

The possibilities and potential of LiFi are immense.

The Global LiFi Congress® will bring together, in an international event, all of the players involved in this new technology.

The Global LiFi Congress® will enable you to learn about the latest technological advances concerning LiFi and its evolution in the short, medium and long term.

How is LiFi able to enhance my strategy for innovation?

How can LiFi give me a competitive edge?

## ■ The Global LiFi Congress schedule

The Global LiFi Congress® will be structured around four key areas:

### ■ MORE THAN 20 CONFERENCES AND ROUND TABLES

The scientific conferences will enable you to discover all of the latest advances in LiFi research and innovation. The round tables will provide an opportunity for an exchange of ideas on the applications of LiFi in a very wide variety of fields such as medical, transport, aeronautics, commercial spaces...

Among other things, the large auditorium (600 seats) and the small auditorium (100 seats) will be available to speakers and will benefit from English-French simultaneous interpretation.

### ■ TRADE SHOW

The magnificent nave of the Palais Brongniart will be reserved as an exhibition space. More than 30 companies, comprised of start ups, multinationals and professional associations will exhibit their latest innovations and products there.

Come and discover the concrete solutions surrounding LiFi.

### ■ NETWORKING SPACE

The agenda of the congress was conceived in such a way as to encourage trade and networking within a friendly atmosphere.

An area of over 300m<sup>2</sup> will be provided for professionals and scientists to exchange views on LiFi's future prospects. These more informal exchanges will give you the opportunity to easily meet other players, future partners and clients.

### ■ BUSINESS

One to one meetings with other delegates in order to create exclusive relationships.



## ■ The companies and entities in attendance

The craze around LiFi is undeniable. Big companies in this sector are positioning themselves to take advantage of this new technology for which the Global LiFi Congress® is a key lever.

The members of the LiFi International Scientific Committee, comprised of the forefathers of LiFi, will be present at this event. This association of scientists has consistently supported the organizing committee of the Global LiFi Congress®.

The start-ups and world leaders in research around LiFi are participating in this congress to bring a certain technological added value. Notably, we will find among them the companies and scientists who invented this technology, as well as the start-ups that matter in this sector.

We will also be presenting the major companies of this world who invest heavily in LiFi, like Philips, which acquired Luciom, a Dutch start-up in December 2016.

Samsung also invests heavily in LiFi. Notably, the brand announced the release of a LiFi compatible phone. Today Samsung is also the company with the largest number of filed patents for LiFi.

LiFi has many advantages and brings real added value in each sector of activity.

Every entity, every business is affected by this technology.

The companies, which are interested in indoor communication such as in transport services or shopping centres see the arrival of LiFi as a solution to many problems.

The telecommunication companies have found a way to counter the saturation of radio waves expected in a few years.

Private and public companies wish to maximise the security of their confidential data through a much safer new technology.



# LiFi: a technological revolution

## ■ What is LiFi?

LiFi is the acronym for Light Fidelity, and is a wireless communication system for transferring internet data at very high speed. Many people compare it to WiFi but in reality there are major differences between these two technologies.

The first major difference: LiFi uses the visible spectrum, known as the optical spectrum, to transfer data while WiFi uses radio waves.

LiFi uses standard LED bulbs to transfer data at speeds of up to 224 gigabits per second (in a laboratory), which is 100 times faster than WiFi.

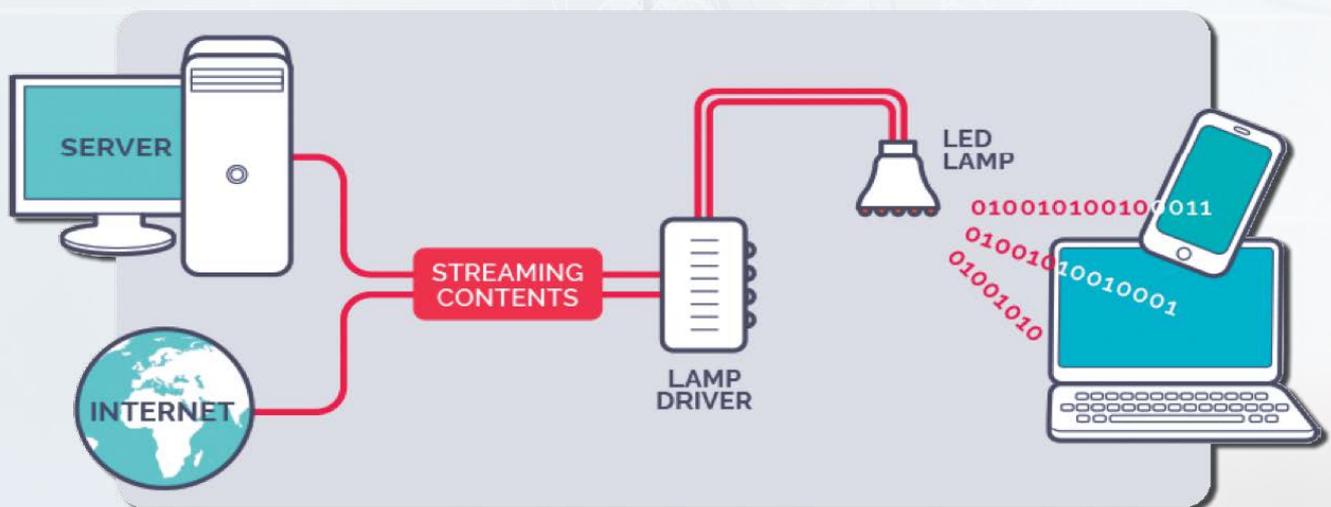
## ■ How does LiFi work?

Data is transmitted via LiFi through light ... But how?

The principle is based on the sending of data through subtly varying the brightness of light sources. An LED is able to flicker several million times per second, which enables data transfer. The light source must be directly connected to the Internet.

Digital data passes by the LED bulb where an electronic component controls the LED in order to make it flicker according to a predetermined rhythm. The digital data thereby passes into the light spectrum. Then a receiver, integrated into a smartphone or a computer, retrieves these flickers and transforms them into video files, text, etc.

Here is a diagram to summarise the path taken by internet data to the receiver:





## ■ What are the advantages of LiFi?

### SATURATION OF RADIO-FREQUENCY NETWORKS

With the increase of connected devices (75 billion by 2023), saturation of RF waves (radio-frequency) seems inevitable. As a supplement to other networks, LiFi is the ideal answer.

### SPEED

Theoretically, LiFi transmission speed is much faster than WiFi, because the optical spectrum is 10,000 times greater than radio waves.

Today, LiFi output reaches 224 gigabytes in the laboratory against a few gigabytes for WiFi.

### GEOLOCATION

LiFi allows us to geolocate a connected object, with an accuracy of 20 centimetres, opening up numerous possibilities. Today, several international firms are developing many applications which are capable of incorporating this technology in order to maximize its use.

This particular feature of LiFi makes it possible to have more targeted and personalized communication, according to the position of each individual, commonly known as geo-contextualization.

LiFi is therefore the ideal technology for indoor places (basements, car parks, shopping centres etc.). The installation of the LiFi system is even facilitated by the lighting systems already installed in these public and private places.

### SECURITY

Unlike WiFi, LiFi does not pass through walls, which makes it much easier to secure a network.

### HEALTH

LiFi does not use radio waves.

In 2011, the World Health Organization classified radiofrequencies as 'possibly carcinogenic'. The draft law 'on sobriety, transparency and consultation in exposure to electromagnetic waves' was tabled by MP Laurence Abeille and was voted on 9<sup>th</sup> February 2015.

### USE IN HIGH-RISK AREAS

LiFi is safe to use in places like hospital, service stations, planes etc because it does not use radio waves.



## ■ Prospects & promises of LiFi

The prospects and promises of LiFi are immense.

This technology and its abundant advantages enable the development of a great number of applications, and brings significant benefits compared to existing technologies.

LiFi offers such great promise that a recent study projected that the Li-Fi market will grow by 80% per year until 2023, driven by significant investments and swift accessibility for private individuals.

In terms of figures, the LiFi global market grew to \$500 million in 2016, and that figure will be multiplied 150 times, to reach \$75 billion by 2023.

Today, major industrial groups are now investing massively in LiFi such as Samsung, Philips, Panasonic, Qualcomm, etc.

Telecom operators are considering reducing the use of radio waves and using LiFi to avoid saturation.

Orange is actively supporting LiFi technology and is pushing suppliers to integrate LiFi receivers into their next smartphones.

In addition, the public authorities are very enthusiastic for LiFi technology: 15 French local authorities, the authorities of the Walloon region of Belgium and the city of Dubai (U.A.E), have initiated discussions for the installation of LiFi within their networks.

Some cities, like Palaiseau - France, have already equipped their public lighting with LiFi LEDs.

The French Museum of Playing Cards in Issy-les-Moulineaux - France has adopted LiFi. In order to trigger content no interaction is necessary: it is enough for the visitor to stand with a tablet under the lamps located above each piece of work.

The La Défense station for RER A, in the Parisian suburbs, is now equipped with LiFi. The RATP wishes to make this technology available to its users in order to guide them and provide internet access soon.

## ■ The future technological advances of LiFi

LiFi is the technology of the future. Scientists are working today on the miniaturisation of the system, in order to integrate a receiver into all connected devices.

These pioneering companies in this area collaborate with the largest international companies in order to be able to supply and develop this technology throughout the world.

Three major stages :

- 1- LiFi companies developed two-way technology, allowing users to receive and send digital data.
- 2- From 2018, the miniaturisation of components will allow individuals to access a LiFi connection with any of their connected devices.
- 3- From now until 2020, the objective is to implement interoperability: which means automatic switching between 4G or 5G networks, to WiFi or to LiFi.