CESP
CERN Entrepreneurship Student Programme

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Connect through light

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Why Do We Need Laser Comm.?

The future needs high data transfer rate

Lasers can transmit data at rates 10 to 100 times faster than radio.

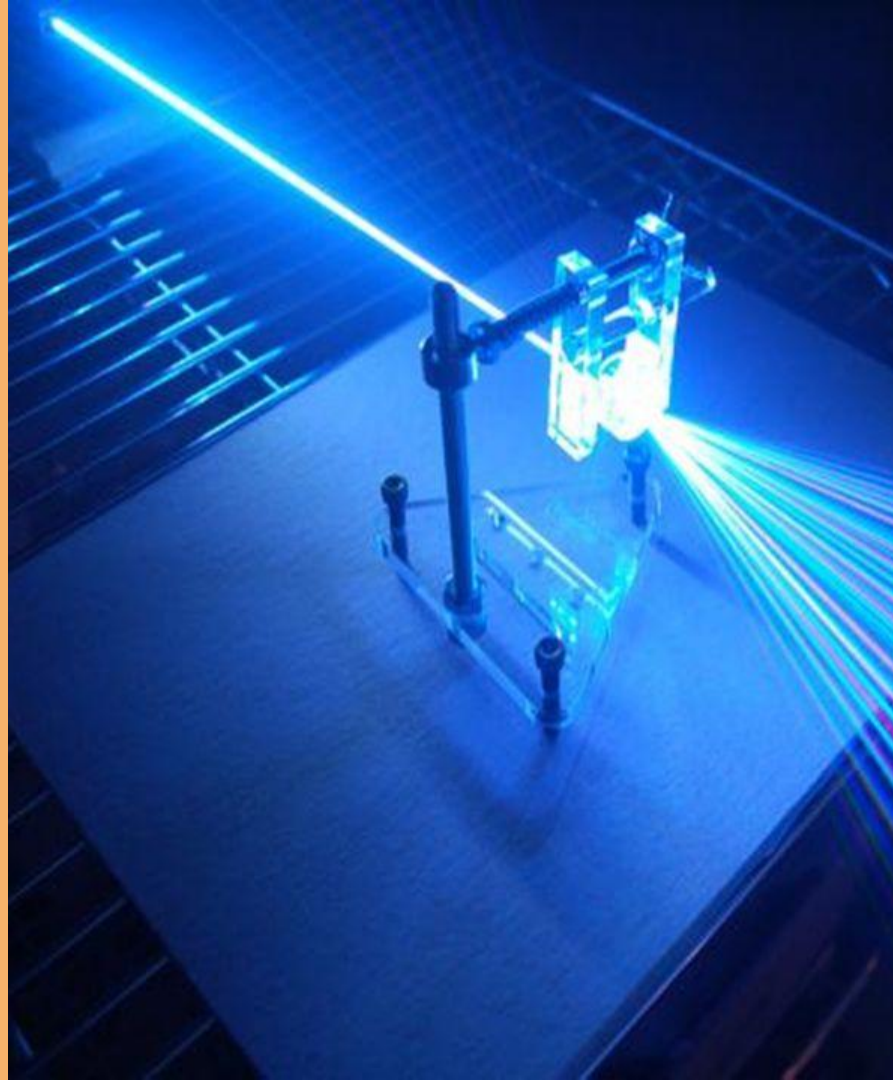
Security becomes more important for society

Laser avoid information dissemination. Resistant to tapping, jamming and spoofing

Interplanetary communication

Laser provide a valid alternative to common RF communication solutions.

Needs



Why SLB?

Meteorological events

*Rain, snow, wind can influence communication. SLB technology is able so **self-reconstruct** in order to overcome those issues*

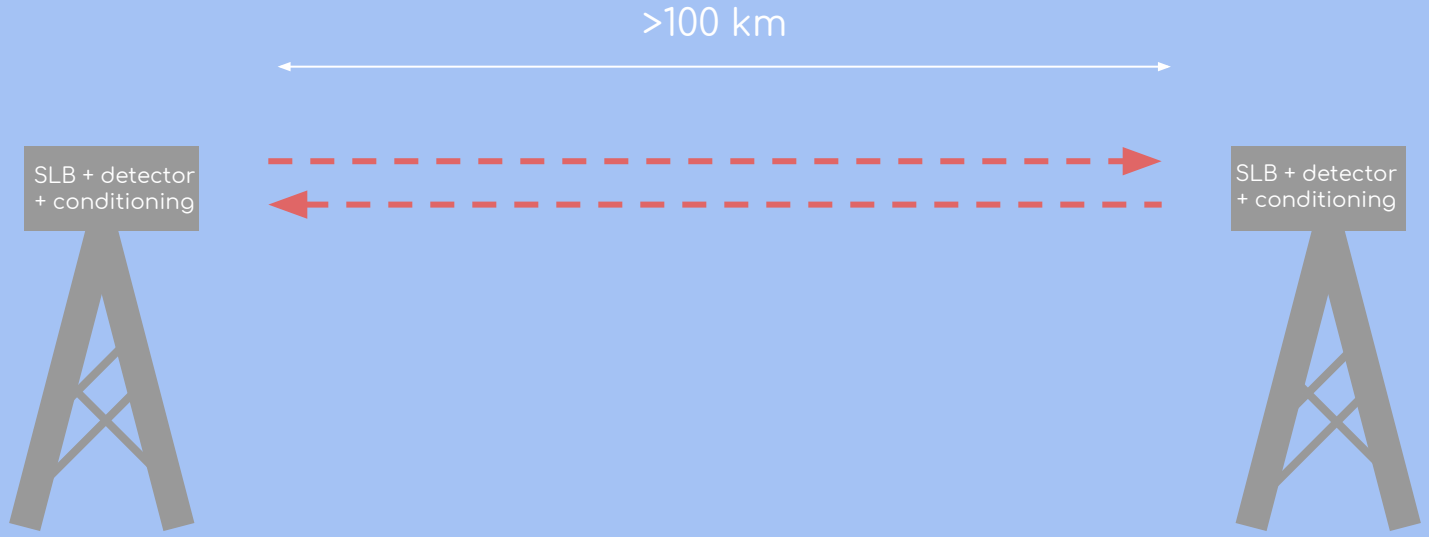
Dispersion

*Laser communication are limited in range due to laser beam divergence. SLB allow to reduce by a factor 100 wrt common implementation, increasing the active **range**.*

Solutions

How we Conneghts you

Compact plug-and-play system to communicate at high distance with high speed and high reliability



Product proposal

Laser communication system based on laser with following characteristics:

- Low **cost**
- High **reliability**
- **Easy to setup** - Plug-and-play technology
- Long **range** (more than 100 km)
- High data **throughput**
- **License-free** - No ITU frequency coordination required
- **Harmless technology -** Cannot harm aliens and humans

Value proposition

Emergency situations

When a disaster occurs, it's fundamental to restore the communication network in order to plan and manage the rescue and assistance services.

Our technology allow to set up in a very fast way a **fast** and **reliable** connection network.

Applications

Temporary installation

Audio communication in temporary stage concert can involve the many high quality cable, increasing the cost and the setup time.

With our **plug-and-play** technology get rid of cables and easily setup a **high-fidelity** audio line, reducing costs and increasing the reliability of the system.

Applications

Satellite communication

Provide a fast, reliable and cheap communication system for satellite-to-ground and satellite-to-satellite communication.

Applications

Product comparison

	LightPointe AirBridge LX	Artolink M1-30GE	Artolink M1-GE	Artolink M1-FE
Max distance	2.5 km	1.5km	4.4 km	7 km
Comm. speed	1 Gbps	30 Gbps	1 Gbps	0,1 Gbps
Energy aperture	-	65 mrad (3,7°)	aaa	555 mrad (31,5°)
Max power	40 W	48 W	46 W	20 W
Wavelength	850 nm (NIR)	1550 nm (IR)	1550 nm (IR)	785 nm (NIR)
Autotrack	Yes	Yes	Yes	Yes
Detector	Si APD	-	PIN PD	PIN PD

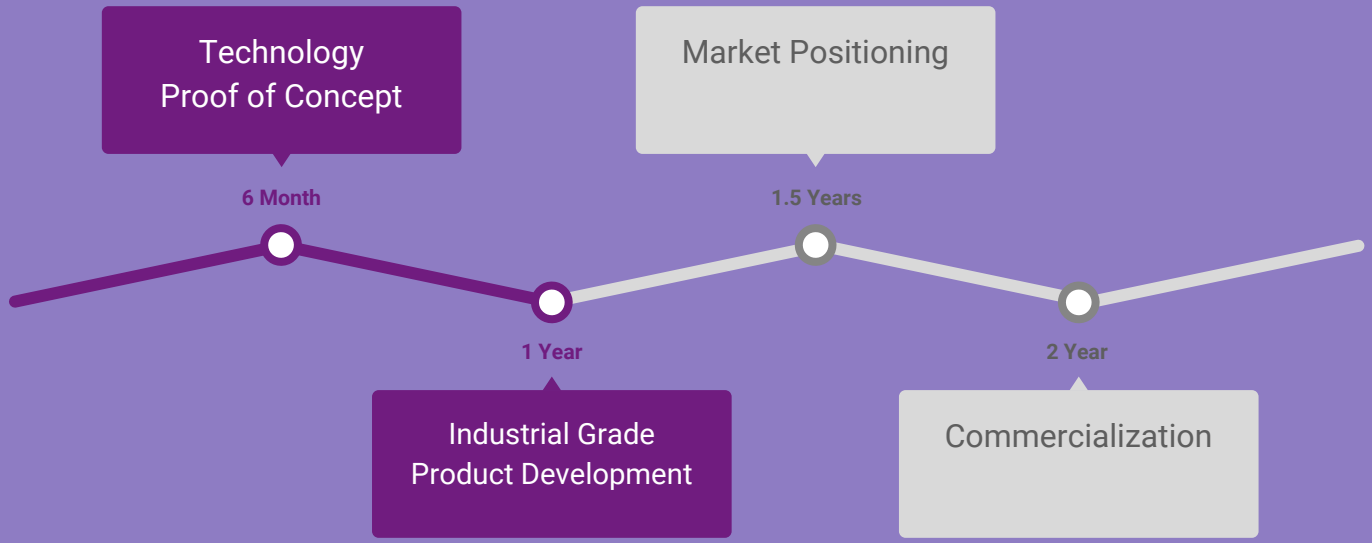
1 Billion USD

Forecasted revenues from Free-space communication market in 2018

32.5 %

Estimated CAGR

Market evaluation



Development plan

Thank you

Question time