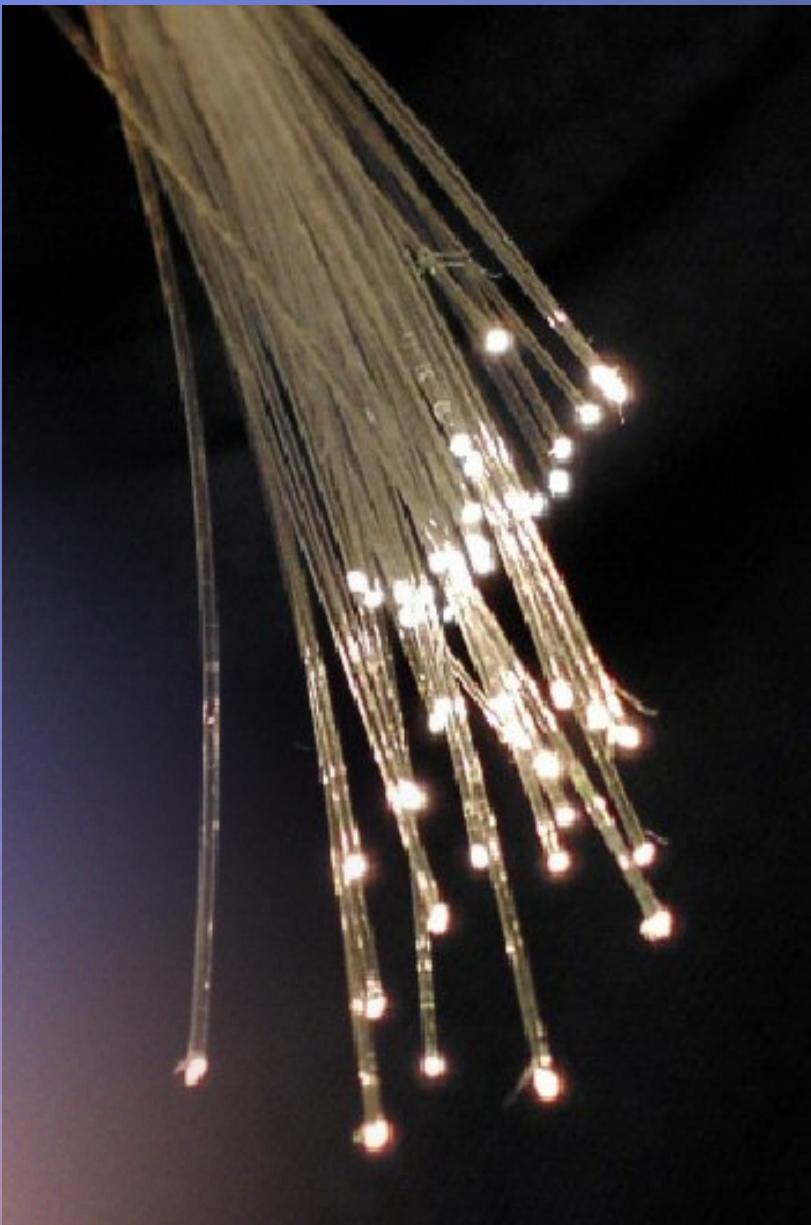


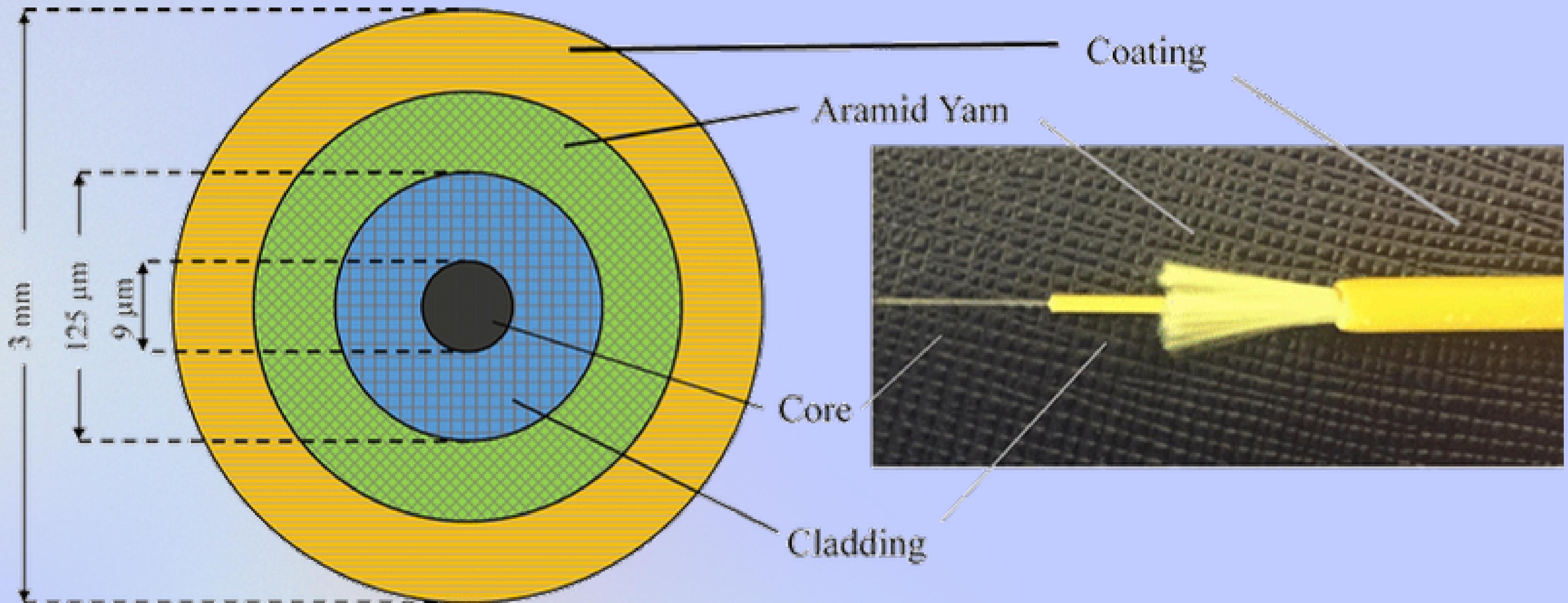
FIBER OPTICS

How they are powering the World.

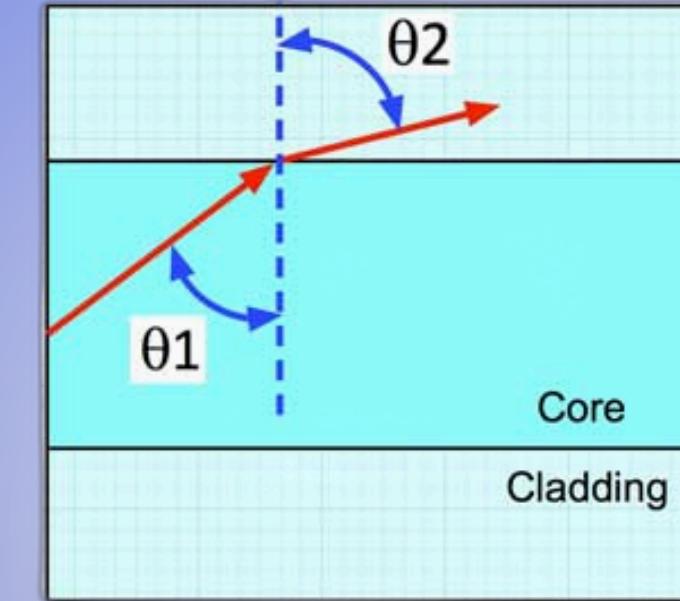
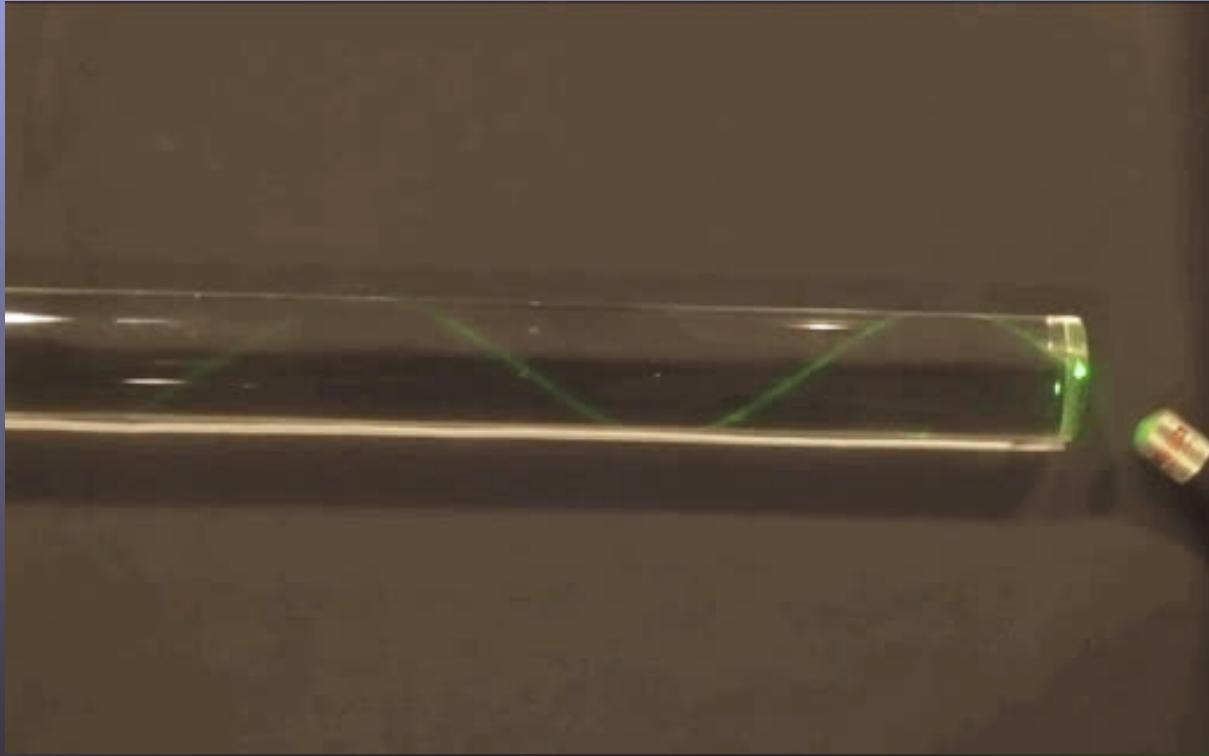
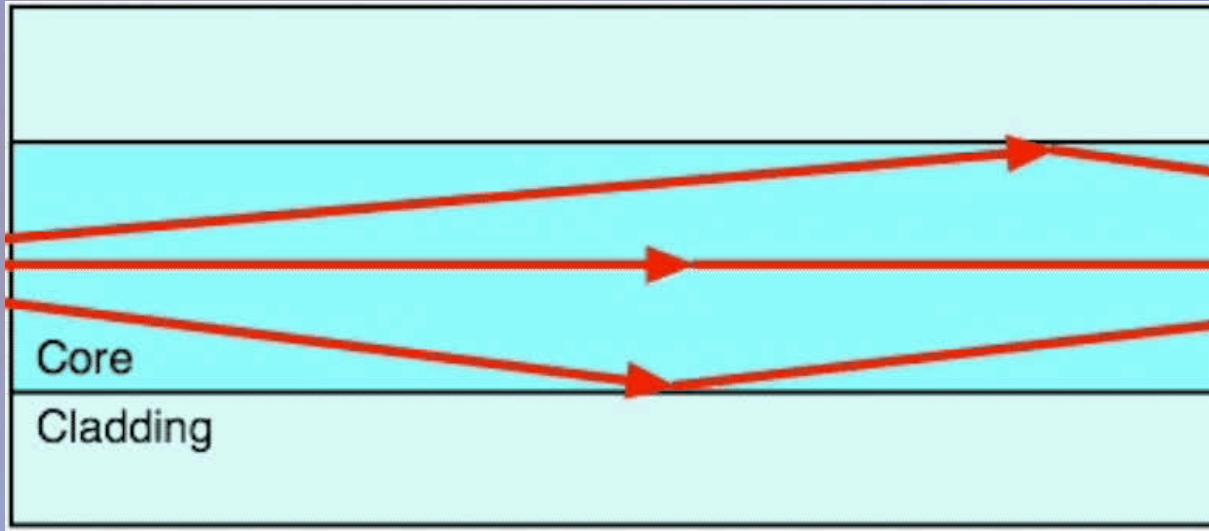


GRUPA 3
Karolina Pijacka 271849
Kacper Pijacki 272415
Dawid Dirbach 272882

How is it built and what does it look like?



Why doesn't the light escape?

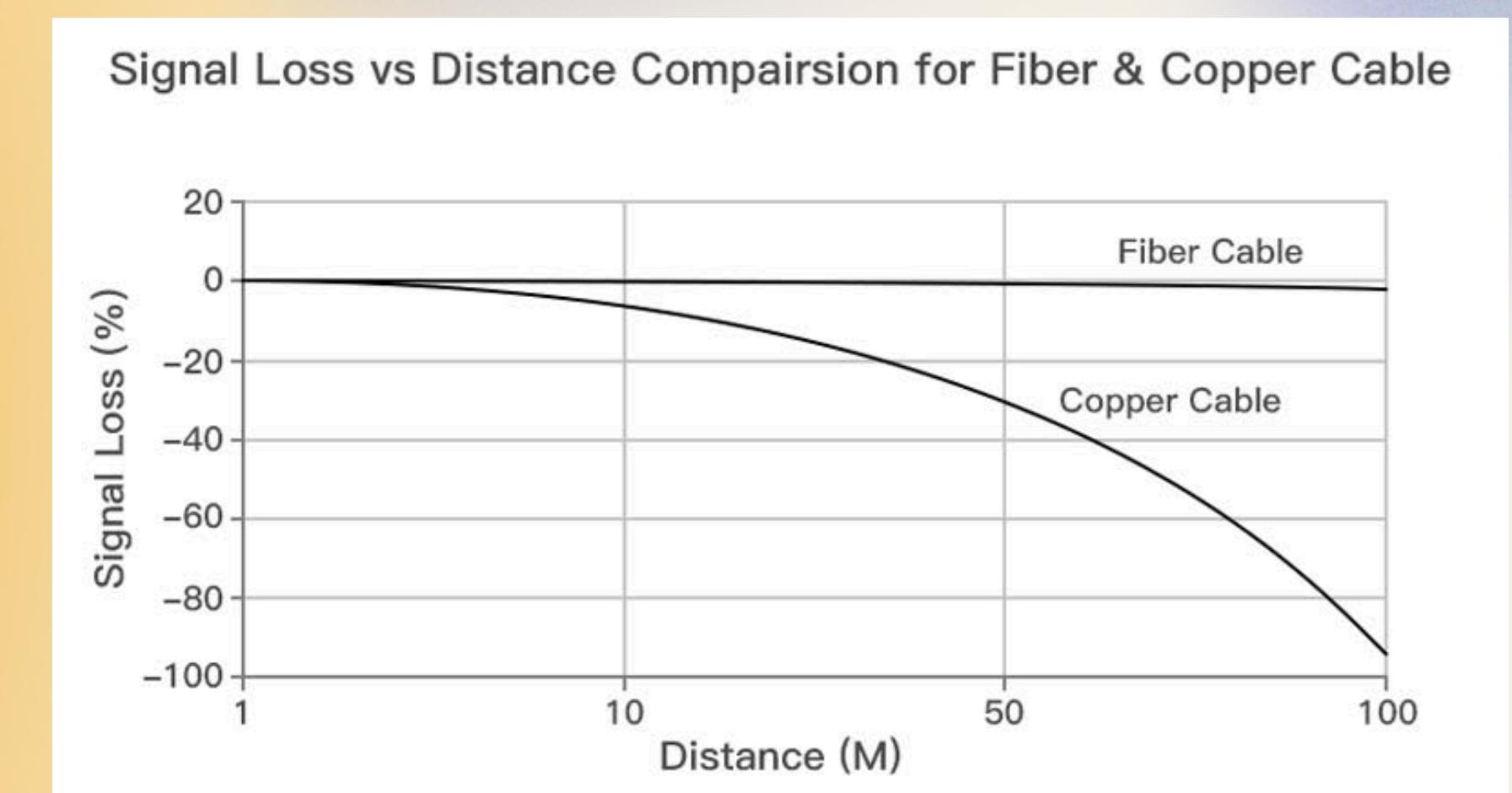
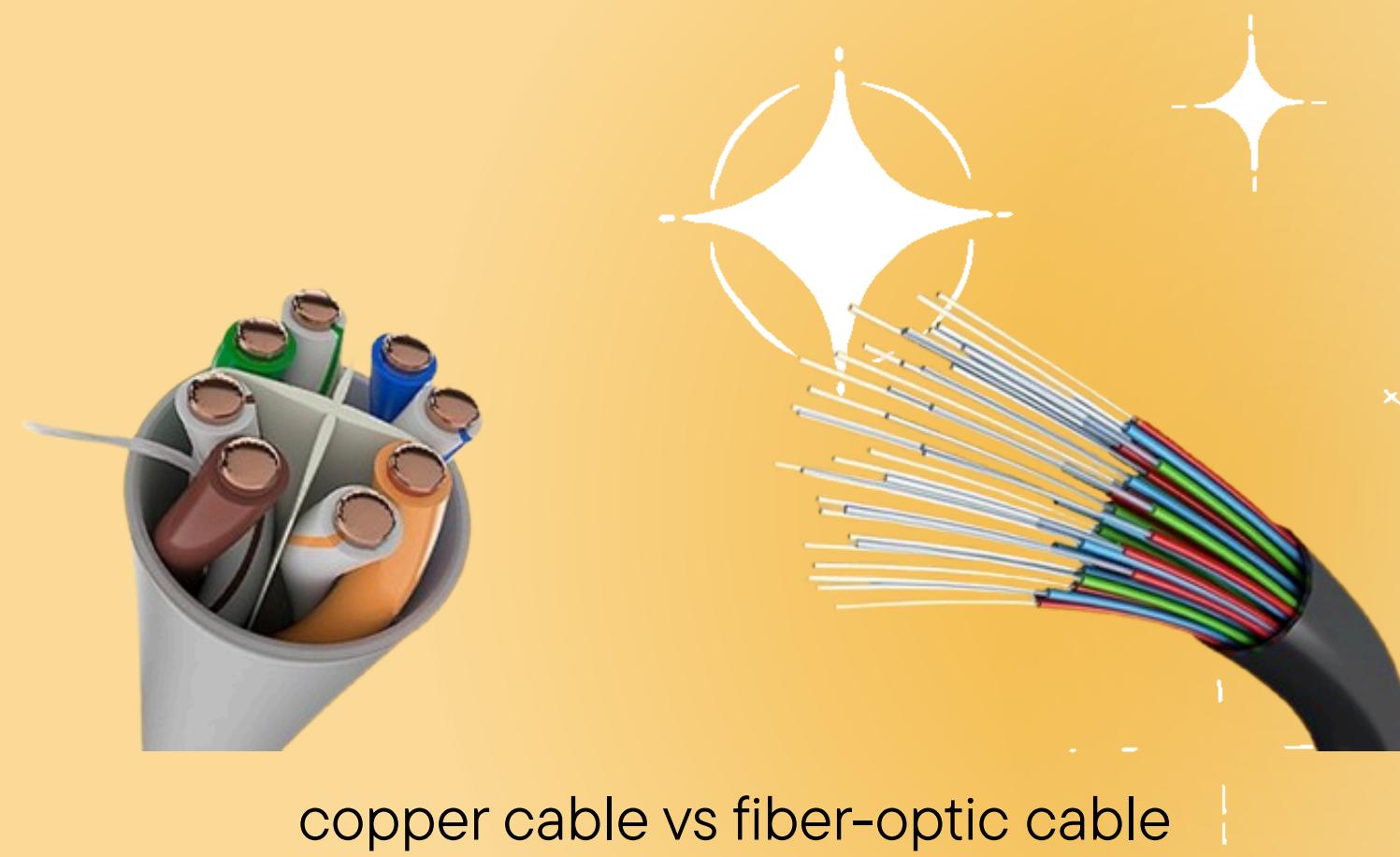


Snell's Law

$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

WHY ARE FIBER-OPTIC CABLES FASTER THAN COPPER CABLES?

Fiber-optic cables are faster because they transmit data using light, while copper cables use electrical signals.



Advantages and disadvantages compared to copper

Advantages:

- ★ Much higher bandwidth
- ★ No electromagnetic interference
- ★ Lightweight and thin
- ★ Low signal loss

Disadvantages:

- ★ More fragile than copper
- ★ Installation requires more precision
- ★ Equipment can be more expensive

MAIN APPLICATIONS OF FIBER OPTICS

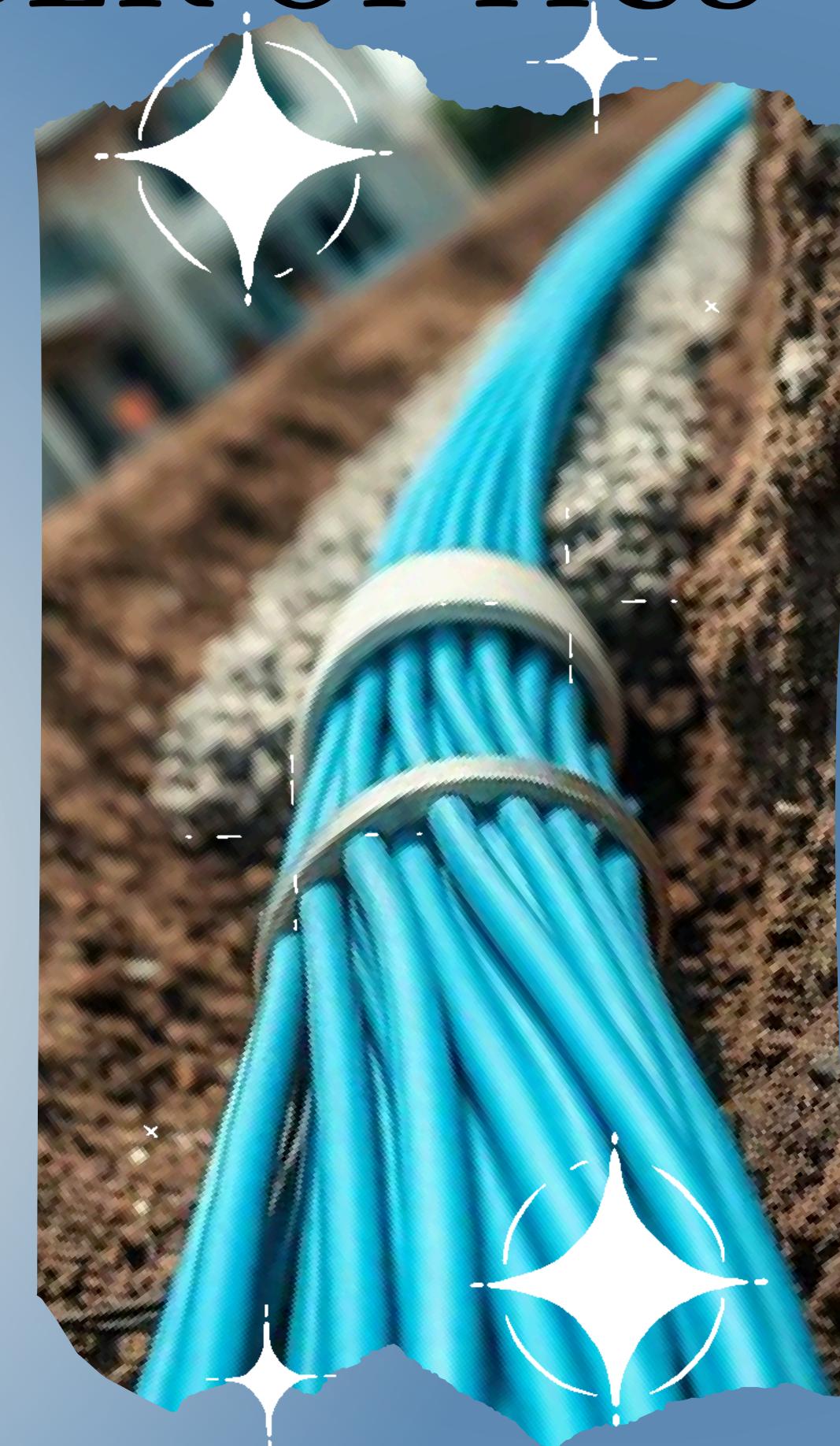
★ Telecommunications



★ Military & Aerospace



★ Medical Technology





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Quizlet