

<p style="text-align: center;">Essay : Dream Machines Application of Robots in Public Works</p>

Subject : Find out more about why fiber-optics is the telecommunications cable of the future. Write an essay describing how fiber-optics works, and what advantages it provides over telephone cable.

In the world of telecommunications, the general trend is to use fiber-optics as a support of transmission. We will first see why fiber-optics is the telecommunications cable of the future. Then, we will have to explain how it works in order to finally show advantages of this new cable.

In the field of information technology, the RJ 45 cable is commonly used with the adapted Ethernet network card. This equipment limits the rate of transmission to 100 Mega bits per second. Therefore, some applications can't be used or have some fluency problem. For example, a video-conference has to be fluent to be efficient. Thanks to fiber-optics, the rate can reach 1 Tera b / s. We can easily understand that this material suits rate-consuming applications.

Moreover, the increase of transmission rate enables more people to use it without overloading the cable and disturbing the others. Therefore, the operator can provide a better service.

Let's now move on to the second point, which is how fiber-optics works. There are 2 kinds of fiber-optics : multimode and monomode. Both are made with a source (LED, laser) and cable with reflexive edge. The former is slower than the latter because the light reflects against the edge, whereas the monomode one enables the light to be driven without reflecting.

Finally, a phone call is cleaner with fiber-optics. Indeed, the cable is less sensitive to the noise. Due to the high rate, the phone operator can now offer the exchange of sound and pictures, to surf on the Internet, etc... In the future, we will be able to transfer video clips.

In conclusion, we can foresee a great development for fiber-optics, which can be adapted to people's use once fiber-optics network cards have been designed.