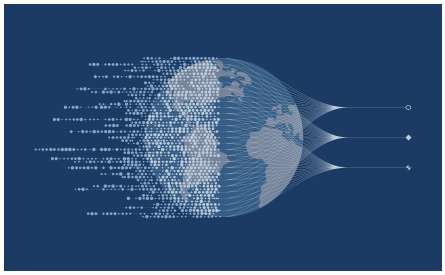

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communications in the tropic

During the rainy season in Costa Rica there are problems with satellite communications. This is due to the large amount of rain and bad weather conditions. It is analysed as follows: the frequencies used in a VSAT with the International Data Centre (IDC) are between 4.172GHz to 4.174GHz and between 6.397 and 6.399GHz. Using the formula, we can find that the
wavelength of these frequencies are 71.9mm and 46.89mm.
Considering the above and that the annual average of rainfall exceeds 4000 mm in the area where the JTS station is located, there are periods in which the attenuation of the satellite signal is very high and could affect communication. Therefore, it is proposed to place a secondary communication system that does not transmit through the air like a business fiber optic service, whose main characteristic is that the
provider guarantees its stability to a minimum of 95% (considering breakdowns). The above, added to a parallel communication of the data to our National Data Centre and subsequently to the IDC, we would obtain backup in the communication and storage of data, as well as
continuity in a reliable manner.

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