are connected to the different OLTs, but the optical direction is almost the same. This structure can also provide full optical path protection and high communication reliability.

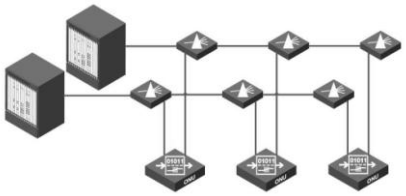

Fig. 9: The topology of EPON system: double "T" structure

4. Conclusions

In the process of building a unified, strong and smart grid, distribution automation technology is of great significance to improve the power supply reliability, increase the capacity, lower line losses and reduce labor intensity. As an important part of distribution automation, the stability and reliability of communication system is directly related to the normal operation of distribution automation system. The access scheme based on EPON can well satisfy the requirements of distribution automation on reliability, transmission ability, security and economical efficiency. It also has very good adaptability to future distribution services. With the technology development of optoelectronic devices and price descending, advantages of EPON will gradually appear. It will certainly get extensive application in distribution automation communication system.

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6. References

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