





instrument, the wavelength of fiber grating sensor data and the result data be sent to the center, and send the end signal, the

data transmission is completed. Monitoring data sending software flow chart is shown in figure 4.

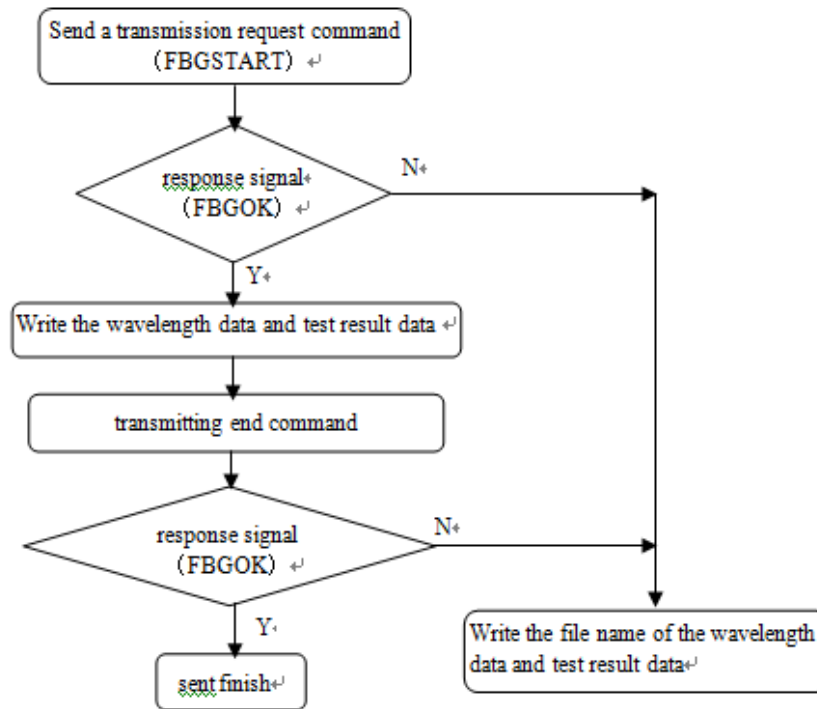


Fig 4 Monitoring data sending flow chart

### V. Receiving Software Design

The control center is consisted of by wireless remote data receiving software and database. The server of control center has a fixed IP address, and using this IP address to access GPRS network. The server can receive the data that send from each the GPRS wireless communication module setting IP address, these data are analyzed and the processed, storage, fault diagnosis. The receiving software interface of wireless remote transmission is shown in figure 5.



Fig.5 The receiving software interface of wireless remote transmission

### VI. Conclusion

FBG monitoring system can be monitoring of multiple distributed fiber grating monitoring stations at the same time, and to ensure the timeliness, accuracy of data acquisition and data transmission reliability. This system uses the GPRS wireless communication mode to realize the grating remote transmission of monitoring information, this way has the advantages of the building maintenance costs low, wide coverage, strong anti-jamming capability, it can understand the monitoring scene information in the control center, thus has broad application prospects.

### References

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