



Figure 4. The GUI of system.

As an integrated data platform, there must be a large number of service calls. In the process of project implementation, the model has received a good practical application, greatly enhance the user experience.

IV. CONCLUSIONS

This paper introduces an innovative error handling model based on service fault-tolerant strategy. It proposes the concept of fault-tolerant strategy, describes the service fault-tolerant model mechanism, shows the life cycle and the state transition of service in this model, as well as the working mechanism of fault-tolerant mode. And the model has been applied in the project of "maritime and shipping integrated system of Yunnan Province". As this model has the characteristics of flexibility and platform independence, it has received a good practical application, greatly enhance the user experience. The feasibility rationality and effectiveness of the model has been proved.

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REFERENCES

- [1] LIU Ling-xia WU Zhao-xue QIAN Yuan, et al. "Fault-tolerant Web Services" Computer Science, 2009, vol. 36, pp. 24-28.
- [2] Schneider F B. Implementing fault-tolerance services using the state machine approach. ACM Computing Surveys, 1990, 22(4), pp. 299-320
- [3] Stelling P, Foster I, Kesselman C, et al. A Fault Detect i on Service for Wide Area Distributed Computations. The 7th IEEE Symp. on High Performance Distributed Computing. Chicago,USA, 1998
- [4] ZHANG Li-min, GAO Chun-ming, CAI Mei-ling. Fault-tolerant processing mechanism of Web service composition in run-time. Computer Engineering and Applications, 2008, 44 (3), pp. 143- 147.
- [5] Iwasa K, Durand J, Rutt T, et al. Web service reliable messaging, WS-Reliability 111. OASIS Specification, 2004.
- [6] Bilorusets R. Web service reliable messaging protocol [S]. IBM/BEA/Microsoft/TIBCO Specification, 2004.
- [7] Liang D, Fang C L, Chen C, et al. Fault - tolerant Web service. Proceedings of the 10th Asia - Pacific Software Engineering Conference (APSEC' 03), ChiangMai, Thailand, 2003, pp. 310- 319.
- [8] Zeng Liang-zhao, Benatallah B, Dumas M, et al. QoS- aware middleware for Web services composition. IEEE Transactions on Software Engineering, 2004, 30(5), pp. 311- 327.
- [9] Salas J, P'erez-Sorrosal F, Pati Marta, et al. WS-replication: a framework for highly available Web services. Proceedings of the 15th International Conference on World Wide Web, Edinburgh, Scotland, May 2006, pp. 23- 26.
- [10] XU Wei, JIN Bei-Hong, LI Jing, et al. A Mobile Agent2Based Fault2Tolerant Model for Composite Web Service. Chinese Journal of Computers, 2005, 28(4), pp. 558-567.