Keywords: DCOM；UML；Embedded system

As a result of variety of characteristic of organism products, bioprocess mostly produce small quantity of batch products, and it is vary different from continuous process. Therefore, the study use the object-oriented design to allow the program model design more flexibly in the bioprocess, and it is to match up multiple demands of market products. On analysises and designs of the monitor system, the study use united model language (UML) to express the relationship and condition between objects. The study use the distributed component object model (DCOM) of Microsoft to develop component. In the DCOM structure, users can make the component-UML to express the relationship and condition between objects. The study use the COM元件架構模型 to express the relationship and condition between objects. The study use the COM元件和架構圖 to express the relationship and condition between objects.

The use of the distributed object for the construction of control system: Study on the case of remote control. The study use embedded system to develop the station of real-time application, and use the thread priority to raise the real-time efficiency of application. The study compare with the system of default process scheduler, and the efficiency shows that the way of remote control can make performance raise 49.25 times in the embedded system. And the study compare with the station of pc remote control. The study use embedded system to develop the station of real-time application, and use the thread priority to raise the real-time efficiency of application, and the performance raise 18%. Therefore, by using the refined control component of design bio-control system can make the real-time design can make performance raise 49.25 times in the embedded system. And the study compare with the station of pc remote control.

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