# Message Processor

The Message Processor is a standalone light weight enterprise java bean component hosted in a separate physical server in the Telecommunication Systems extranet. The idea of hosting this component as a separate component serves the purpose of doing its job that is independent of other server components and supports asynchronous messaging. The main function of MP is to process the mailing requests for FURLS application modules. Currently MP supports two different application modules such as FFRM (Food Facility Registration Module) and OAA (Online Account Registration Module). One of the main architectural decisions made while designing this component is that it should be able to seamlessly integrate future mailing requests from any FURLS application modules say, for e.g. FFRM, OAA, and LACF etc without too much plumbing of code. Some of the other architectural foundations based on which this component is designed are Tiered, Layered, Component based architecture, Patterns framework and application of systemic qualities.

# High Level System Design View



The Message Processor component uses the standard enterprise java bean 2.0 Message Driven Bean to dequeue the messages from the java messaging queue that is hosted by the clustered oracle 9i database. The message driven bean acts as a listener and it gets invoked as soon as the message arrives in the JMS queue. The MP implements two message listeners where one is used for mailing request and the other is used to notify the PPF help desk about the Paper related registration processing exceptions.

There is a common interface from which each individual application related mailing request implements and this gives the added benefit of loose coupling of components and there by achieve scalability in terms of adding more modules in the future. The MP uses the standard J2EE Java Mail API to notify the customers about various mailing notifications for different modules. The MP session bean component requires the initiator to facilitate the application related mailing request.

The message processor component uses the factory pattern to obtain the necessary interface to delegate the mailing request for further processing. The MP receives the mailing request via XML message and it also sends a log of the same XML message to paper processing facility for records management purpose. If the customer does not provide a valid email address, the MP decides to send the XML message to PPF to process the mailing request via USPS mail.

# MessageProcessor Class Diagram (Logical View)

