**Requirement Specification**

**LiveShop**

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4. User Requirements Definition

This section covers the definitions for the user requirements of the proposed system. The requirements can be categorized into functional and non-functional requirements.

4.1 Functional Requirements

The functional requirements include, but are not limited to, the following items:

1. Live Streaming
   * The system must support live streaming services in order to enable the show host(s) to advertise products to be sold.
2. Live Chat
   * The system must enable prospective customers to type in various comments such as reviews and questions about the product. The comments written are delivered by pressing the “Send” button.
   * Show hosts and advertisement committees must be able to give feedback on the customers’ comments.
3. Disclosure of Product Information
   * Aside from what is shown in the live-streamed advertisement, the system must display all the essential information that describes the product to be sold in detail.

4.2 Non-functional Requirements

The non-functional requirements can be further classified into Product Requirements, Organizational Requirements, and External Requirements as follows:

1. Product Requirements
   1. Performance
      * The system should have little problems in loading and delivering live-streamed session to the customer on time. The Live Streaming service must be able to deploy video frames of maximum quality supported by the mobile hardware on which the video is being streamed (mostly 1080p). Otherwise, it should deploy the quality as selected by the user’s choice. In addition, as the name suggests, the live-streamed session should virtually have no delay compared to the time point of recording through studio camera. Ideally, the only tolerable delay is the transmission delay: the time it takes to transfer frames of live-streamed video towards the user.
      * The system should have little problems in providing live chatting service. Besides free of bottlenecks in typing in messages in the textbox of Live Chat, a customer’s comment must be delivered to advertisers and other customers immediately after the “Send” button is clicked.
   2. Security
      * The system should not be prone to hacking. Sensitive information related to a customer, especially personal information, must be securely stored in the database such that nobody else than the corresponding person oneself is able to access and modify it.
      * Live Streaming service needs to be protective from video packet sniffing and hijacking. Only the live-streamed video on the relevant product must be advertised throughout the lifetime of advertisement session. Otherwise, customers might get seriously confused.
   3. Power Efficiency
      * Power management issue is crucial to mobile devices that run on battery. Both the Live Streaming and Live Chat service should not consume too much power. Modules that run the services must be put to sleep whenever the software application is closed or set to background state.
   4. Usability
      * The customers should have little problems in pausing of the Live Streaming service, changing the video quality of it, or transitioning the video between windowed and full-screen mode.
      * The customers should have little problems in using the interface provided for Live Chat service.
   5. Integrity
      * The customers have the right to report the product advertisement if it is suspicious of being fraudulent or mendacious. In addition, if the product delivery period is way too long, the customers have the right to report such incident also. The system must provide feature(s) that enable such actions.
      * Although rarely occurring, there are cases when a malicious, ill-mannered user gives out disparaging comments toward the person(s) involved in the show or any other specific social group of persons via Live Chat. The Live Chat feature is also prone to false claims and incorrect conflicting information about the product being advertised, which may be detrimental to product sales. To prevent these cases, the system must provide a service to report abuse of the Live Chat functionality.