Android makes various design patterns available to the developer of Android applications. One that will be prevalent in the Smart Homes application is the use of Notification Services. Using this pattern in an Android application, you can inform users about specific events or information that are related to the app and their use of the application.

In Android 5.0, Google has provided various updates to notifications. These are outlined here:

* Visual – notifications now follow the new design patterns found in the material design themes that are part of Android 5.0. This allows the developer to conform to the material design patterns when using notifications, giving their application notifications a fresh and consistent look.
* Lock screen – notifications are now available on the lock screen. While this permits users to see notifications without having to unlock the device, such as a quick glance to see what the notification is about and act on it later, the ability to prevent sensitive information from displaying on the lock screen is also available.
* Cloud-sync – if the user has multiple Android devices that might receive the notification, the cloud-sync functionality is a way to allow the dismissal of the notification on one device, to dismiss it on other devices as well. This way, users don’t have to dismiss the same notification on all their devices, one at a time.

Notifications consist of a standard base layout that includes an icon, a title, text message, and a timestamp. Expanded layouts for more information display when used on devices such as tablet or phones with larger screens, while permitting smaller layouts for wearable devices.

You can also make use of actions on the notifications. These can be displayed on the bottom of the notification window and allow the user to handle common tasks associated with the notification such as opening an application or sharing the information in the notification with social networks or email.

Heads-up functionality displays the notification on top of running applications and after a brief pause, the notification is then dismissed to what is known as the notification shade. In this way, the user can see an important notice and then deal with it later. Use this type of notification for incoming phone calls, alarms that have been set, or low battery warnings.

Proper use of notifications in an application can help enhance the user’s experience with the application and provide functionality that might be critical to successful use. Like all “distracting” application features, judicial use is imperative.