

# Implementation of 3D based Interactive AppBook

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## 1. Introduction

Recently the AppBook is introduced due to the development of smart devices and user-experienced smart interface technologies[1]. This AppBook has focused on the user interaction and has provided the special user experience which could not be presented in the paper book. The AppBook can provide the reader to see, hear, and touch experiences using the audio, video, multimedia, 3D modeling, augmented reality technologies. This paper introduces the implementation result of the 3D based interactive AppBook. The proposed interactive AppBook developed the 2D and 3D mud flat contents, interactive touch, video playback, audio play, and augmented reality technologies. The proposed AppBook is very useful for learning e-Book contents for the lower grades students in the elementary school. The elementary school students are very much like to see this proposed AppBook with the touch interaction and augmented reality.

## 2. Implementation of the Interactive Appbook

We designed and implemented the interactive AppBook presented by the Figure 1. In the Figure 1, ① is the next page movement interface with touch, ② and ③ are the main characters of this appBook. If you touch these characters, the touched characters would be animated by the 3D contents. ④ is the help icon which is popped by user's touch action. ⑤ shows the story of this appBook contents which is developed 2D text and voice narration. It is the story of "Rana's Journey of the Mud Flat.

In the Figure 2, ① is the previous page movement interface with touch and ③ is the next page movement interface. If you touch ② and ⑧ contents, the user's mission is displayed on the popped page. If the given mission is completed successfully by the user, the success message is displayed. ④ is the main interactive character which is animated by the 3D contents. ⑤ and ⑥ are the same function as ④ and ⑤ in the figure 1. ⑦ contents can be moved into any place on this page.



Figure 1. Main Page of Rana's Journey of the Mud Flat

Figure 2. Another Page of Rana's Journey of the Mud Flat

Figure 3 is the example page of the mission contents and figure 4 is the last page of the implementation result of this Appbook.



Figure 3. Mission Page of Rana's Journey of the Mud Flat



Figure 4. Last Page of Rana's Journey of the Mud Flat

### 3. Conclusion

This paper represented the implementation result of 3D based interactive AppBook. This appBook applied the interactive touch skill, video playback, audio play, and augmented reality technologies. This appBook is very useful for learning e-Book contents for the lower grades students in the elementary school. We presented the 2D and 3D contents on the AppBook with the user-experienced interaction.

### 4. References

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