Open Contents Distribution Platform

Using Atmospheric Information

This dissertation dedicates establishment of platform for new generation media providing highly valuable contents fitting in the daily life and human activity anywhere and anytime to the people beyond current available media. For such new media, this dissertation advocates an open contents distribution platform using atmospheric information. The openness in this open contents distribution platform is evinced by dynamic usage of diverse display terminals in contents distribution and diverse contents of each content form by a single user to multiple users, which are provided by various kinds of players. Atmospheric information describes the conditions to present each of the contents with the actual data in the target real space. The open contents distribution platform allows merging current available media regardless the formats in content forms and delivering highly valuable contents to a single user, community and mass with simultaneous utilization of personal display terminals and public display terminals. In order to ensure openness in contents distribution for the new media, (1) the restricted display terminal usage in contents distribution and (2) the inclusive usage of diverse content forms without restriction of available contents are tackled.

The platform advocated here is implemented by a conceptual process model. This conceptual process model is structured by a code definition translator engine, an atmospheric information generator engine, a strategic presentation engine and a content registration engine. The code definition translator engine drives the entire process with trigger information and the inserted information is translated into the information structure. The information structure fulfills the commands of the atmospheric information generator engine. This engine acquires the output strategy and output status to generate atmospheric information with three kinds of information. The strategic presentation engine conducts content selection and content scheduling with the information structure, by determining content form with output strategy and by selecting a composition with output status. The content registration engine registers the contents with atmospheric information as the condition. This conceptual process model is applied to a digital signage system on a shuttle bus for proof of concept.

In addition to the proof of concept, the openness in this open contents distribution platform is evaluated. The diverse contents in the content storage inside and outside this platform can be utilized. The dynamic usage of multi-display terminals and the utilization of multiple users can be implemented as well. The inclusive usage of diverse content forms can also be realized by using atmospheric information. Using diverse contents forms does not restrict available contents and ensures the openness of this open contents distribution platform. This dissertation contributes to realize an open contents distribution platform using atmospheric information and establishes a basis for the new media.