

## **Abstract**

Based on its e-Government project, ROC government is stepping in a new stage of routine services. Record management that serves as the basis of government knowledge management, are transferring into digital manner to enhance the efficiency and the convenience of the related services. Regarding the explosive increase of record volume and emerging of information technology, the Long-Term Accessibility of preserved material become a crucial issue on e-record management. Aiming at keeping and managing files through long period, as well as to facilitating record with knowledge inside, a stable, scalable infrastructure and the underlying business model for manipulating information becomes the very important task for knowledge management within e-government field.

It is found interoperability between processes and between information is the key point of such interoperable information architecture. Therefore, this research applies Zachman Framework as an approach to investigate the required information, processes, and locations and further the IT architect for such a system as described above. Integrating existing models on Knowledge Management and related Record Management works done in USA (so-called Knowledge-based Grids by NARA) and Australia, this research carries out the "Knowledge-based Record Management Spiral" to enhance the recognition, acquirement, and utilization of

archive knowledge.

Based on the aforementioned architect, this thesis combines the experiences from "Knowledge-based GRIDs" of SDSC and "ebXML Collaboration Framework" by UN/CEFACT, and then coins a blueprint for the "Knowledge-based Preservation and Collaboration Framework"(KPC Framework), The KPC Framework can be applied by archivists or archival designers to model the collaboration activities in digital archive domain. Last but not the least, this framework is employed to build a trial model for Taiwan's governmental e-record management and a validation on the feasibility of this model is also done by means of informal test.

