Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - Operations Management

Title	Implement data management for VR / AR applications
Code	107998L4
Description	This unit of competency applies to development personnel in the DMT (digital Media Technology) profession. Data management is one of the mandatory tasks in any ICT development process and both Virtual Reality (VR) and Augmented Reality (AR) applications are of no exception. This UoC concerns competencies in handling and manipulating data during the AR / VR apps development process in the capacity of a developer.
Level	4
Credit	3
Competency	Performance Requirements 1. Knowledge for data management for VR / AR applications • Master programming knowhow, concepts and techniques • Understand the organisation's policies and guidelines towards data management for VR / AR applications, if any • Possess specialized programming skills in areas such as : o Authoring o Engineering o Quality testing o Database management systems (DBMS), etc. • Familiar with programming languages related to the data management context such as: o Objective-C o Swift o Java o SQL o PHP o ASP.net o JSP, etc. • Possess good understanding about data manipulation in the process of VR / AR applications development, such as : o Overhead in creating plausible application scenarios o Scalability in the data size of the physical world accessible by VR / AR o VR / AR related visual clutter and graphics overload o Data management for very large geographic 3D models, etc. • Keep abreast of the new developments and technological advancements in the ICT industry 2. Implement data management for VR / AR applications : • Identify the data needs for the applications to be developed, with special focuses on VR / AR features • Determine the methods and options for data management issues, with special focuses on VR / AR features • Determine additional data management options for handling VR and AR, such as: o The higher processing power which requires a 3D VR data management system o The capacity in allowing users to transmit information related to visual and interactive components defined as functions of the time variable o Ownership and privacy of the data, etc. • Create local, remote, web or cloud based data storage according to the requirements of the VR / AR applications in concern and guidelines of the organisation

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	• Create and link databases to the user interface such that information can be retrieved, stored and processed interactively via the VR / AR applications • Perform session data creation, removal and replication both locally and remotely • Monitor the operation of data and interaction with the VR / AR applications to identify possible loopholes and problematic areas 3. Exhibit professionalism • Always be current and updated with trends of data management technologies • Apply industry's best practices to data management that meets the organisation's business needs and conformed with the requirements of the VR / AR applications in concern
Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: • Grasp the organisation's policy and guidelines towards data management and apply to the VR / AR applications in concern accordingly • Design and implement the required data management methods that can operate correctly and conform to the requirements of the VR / AR applications
Remark	This UoC contains the features mentioned in the other UoC "Implement data management for apps" with additional requirements for VR / AR applications.