

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

Functional Area - Operations Management

Title	Setup rendering farm
Code	107950L3
Description	This unit of competency applies to all Digital Media Technology (DMT) practitioners who are involved in setting up rendering environment for animation production. To dramatically reduce render times one can create a distributed network rendering farm with multiple computers. Each computer will render a different frame of the animation, or part of the scene with the render manager controlling the submission of the jobs to rendering node. This UoC concern setup of render farm locally. However, with maturing of network technology rendering farms can be implemented in the cloud.
Level	3
Credit	3
Competency	<p>Performance Requirements</p> <p>1. Knowledge for setup render farm</p> <ul style="list-style-type: none"> • Possess basic knowledge of animation principles • Possess good knowledge of computer and network infrastructure • Possess good understanding of animation rendering techniques • Updated with trends of animation rendering technologies <p>2. Setup render farm</p> <ul style="list-style-type: none"> • Preparations for render farm setup, include but not limited to the following: <ul style="list-style-type: none"> ○ Comprehend the render farm infrastructure design ○ Purchase all hardware (e.g. workstations, servers, Network Attached Storage NAS) ○ Network connections installed and tested ○ Render farm software purchased with license (e.g. render software and controllers) ○ Reference manuals, installation instructions, etc. • Select appropriate render management software for the render farm controller. Desirable features of the render management software may include the following: <ul style="list-style-type: none"> ○ Interactive Network Rendering ○ Render across hybrid (e.g. PC/Mac) networks ○ Automatic node detection and activation ○ Compatible/support most of industry's common animation software, including: 3Ds Max, After Effects, Blender, Cinema 4D, Maya, Modo, etc. • Install and connect all the render nodes, server, and network storage (NAS) connected to the same network. • Install rendering software on the rendering client and install the render farm management on the controller which is used to queue/submit rendering jobs to the render nodes • Create a shared folder for use by the render farm (Create a folder on a node, preferably on a server or NAS that is accessible by all the other nodes which will process or use the render farm) • Perform necessary integration and load testing to ensure all nodes, and software are performing as expected <p>3. Exhibit professionalism</p>

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	<ul style="list-style-type: none">• Apply industry best rendering techniques and use most appropriate rendering application to achieve the best result
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none">• Understand the render farm design and have all the necessary hardware, software and network purchased and prepared for the setup of the designed render farm• Successfully install all the rendering software on all nodes and the render controller. They are linked and can be managed by the management software on the controller• Test the render farm to ensure it fulfills the integration and expected performance required by the design
Remark	<p>This UoC concerns setup of render farm locally. However with advancing network technology, complex 3D animation demands and affordable cloud services, organisations will consider using SAAS rendering farms</p>