**Journal 1**

**CANT ACCESS IT**

**JOURNAL 2**

New Heuristics proposed instead of Nielsen’s the examples of these are Heuristic Evaluation, games, learning and collaborative work. The reason that these new heuristics are becoming popular and needed is because they can longer work on emerging technology of Virtual reality (VR). An example where heuristics would be used is in the case of crisis management within a virtual environment this allows professionals to test within the environment requiring less time to prepare and can test new situations incredibly easily. Although there is a large amount of research going into virtual environments (VE) there a very few Heuristic evaluations for it apart from Sutcliffe and Gault and Kalawsky who are both heavily cited on the subject. This may be because of the difficulty of writing a detailed VR heuristic because of broadness of Virtual Environments.

The paper looks at how a VR heuristic is used for crisis management on a training simulator. Sutcliffe and Gault used 12 heurists listed here (Show Table 1) and with that used it to test the VE they managed to uncover many serious errors within the virtual environment.

In the results section one of the results recorded by Bordegoni et al looked at a haptic based system for a virtual manual assembly. An expert evaluated the system they used 9 out of the 12 heuristic points listed in Table 1. The expert was asked to perform two tasks, they then rated them from 1(Very Bad) to 4(Very Good). This does not seem very effective and will not gain as much information about the system as a quantative evaluation would have done or an interview this will have collected the bare minimum to do with the system.

**JOURNAL 3**