

Due to the research and technological advances, ubiquitous or pervasive computing is emerging rapidly as an exciting new discipline to provide computing and communication services all the time and everywhere. While with many ongoing initiatives, it is too far to achieve the vision that Mark Weiser described. After a comprehensive analysis on traditional paradigms, we argue that, not users-friendly, i.e., users can not get services from computer easily, is one of the main reasons. In this paper, a new computing paradigm, i.e., Transparent Computing will be presented to solve this problem partially. Accordingly, we propose and develop a pilot system, which runs in a network environment and operates at the assembler instruction level. This system lets users demand heterogeneous OSes and applications upon them from centered simple servers, similar to choose different TV channels in daily life. We also present some primitive real and experimental results to show that it is a feasible and efficient solution for future computing infrastructure.