Abstract
In this paper, we discuss how to test partially specified IOTS through lossless queues. A liberal assumption is made of the IOTS model by allowing both blocked and unspecified input actions. For testing IOTS through unbounded queues, we demonstrate that test cases can directly be derived from the specification when the transition coverage criterion is used, and we provide two test derivation algorithms, for fully specified and partially specified IOTS, respectively. Applying the derived tests to test IOTS through bounded queues is also discussed.