

Algorithm Design
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Solution of Exercise C-11.15

In a biconnected network, there will be at least one node x that receives both versions of the message. If each node keeps a copy of the message sent (or even a cryptographic hash of each such message), then it can confirm each time it receives a duplicate message that this message is indeed duplicate. If a router discovers a forgery, it can send a broadcast flooding message identifying this forgery. The message complexity is therefore $O(m)$ for both the detection and announcement phases.