An efficient media ports resource discovery for service networks

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Abstract: Interest in service specific overlay networks (SSONs) has been increased in recent years, where each overlay is designed to meet the user's specific requirements. It is considered an effective means to support end-to-end quality of service guarantees. A key component of these overlay networks is the media ports (MPs). MPs are network side functions that provide value added functions such as catching, synchronisation and adaptation. Efficient overlay networks construction requires an efficient and dynamic MPs resource discovery approach. In this paper, the researchers propose a new resource discovery scheme for MPs. The proposed approach clusters MPs into groups of similar types. Clusters are disjoint with no global entity. To discover MPs, a modified version of random walk (RW) called RW+ is presented. The proposed RW+ allows network nodes to learn about existing clusters and resources in an efficient way which renders RW+ to be partially random. This greatly enhances the performance and the efficiency of the resource discovery scheme.