changes cannot influence the result of d_{AD}^{NRIT}. In reality, the trust between two users should not be affected greatly by the trust among any other users. In other words, it is undesirable that the trust between two users is strongly correlated to some uncorrelated trust values of others. As a result, depending on the analysis above, it shows that the proposed NRIT-SA is more conform to the reality than the full search algorithm.

V. Conclusion

In this paper, we propose a hybrid CDNi-P2P architecture, an NRIT search algorithm, and two trust models: a local trust model and a cross-domain trust model. Based on the proposed NRIT-SA and trust models, a user can calculate his/her local trust more effectively and accurately, and a mobile user can transform his/her local trust into mobile trust that can be taken to and used in a new domain. The proposed models can avoid disparate trust values for a single user in different domains and improve the availability of content possessed by mobile users as they move among different domains. And from the performance result, we know that the peak value of the calculation time appears around 20% of connectivity degree, and along with the increase of the connectivity degree, the calculation time will decreases exponentially. And when the connectivity degree is more than 40%, the calculation time tends to be stable, which value is around 1s. From the comparison result with the full search algorithm, we can see that our NRIT-SA shows more efficient calculation performance and more reliable indirect trust result. In the future, we will research more available cross-domain trust models for different network architectures.

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