Natural Language Conversation is a long-standing goal of AI and NLP. Natural Language Conversation between human and computer is one of the most challenging AI problems, which involves language understanding, reasoning, and the use of common sense knowledge, while Short Textual Conversation (STC) has focused on short conversation from text. STC is one of the challenges and the first demanding of the Natural Language Conversation domain.

How can we approach Short Textual Conversation?

![Diagram of Short Textual Conversation process]

- **BUPTTeam Participation at NTCIR-12 Short Textual Conversation — 1st place**

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**Motivation**
- Analyzing big data will become a key basis of data mining.
- Natural Language Conversation via STC is a possible technology to make conversation based on big data within tolerable elapsed times.

**Index Building**
- The repository is huge so that we could not generate comment candidates quickly. To address the problem, we use Elasticsearch to build index of posts and comments.

**Comment Candidates Ranking**
- To find the most appropriate comments for a new post, we use a referent graph-based approach for candidates ranking instead of directly based on the relevance score of comment candidates for a new post.

**Summary**
- We use Elasticsearch to build search index and the random walk which is a graph-based method to do comment candidates ranking. The evaluation results show that our method significantly outperforms state-of-the-art STC task.

**Acknowledgments**
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