



Figure 2. The best pick up route of “Western Jiading”

By comparing these two figures, we show that the simulated annealing method can make a complex original planning path into a circulation path. This path also complies with all the requirements of TSP and is the shortest one.

4. SUMMARY

According to the previous introduction in using simulated annealing method to solve the TSP and the analysis of the example above, we can clearly see that simulated annealing method is able to find out the shortest cycle path quickly and effectively.

In fact, by the algorithm we are able to obtain the best path. The optimized path, compared to the original path, reduces a length of 9500 meters. The results also demonstrated the effectiveness of the simulated annealing algorithm. We used relative coordinates, which allow us to calculate the distances between the suppliers without taking the location of the origin into account. This provides us more flexibility in the establishment of the coordinates system.

Objectively speaking, there is not existing an optimal algorithm for solving TSP problem, the application of each algorithm has its limitations: classic algorithms pursue exact solutions, but the algorithm ignores the consumption of time and space and the feasibility is not high. And modern popular algorithm is the pursuit of approximate solution, reduce the consumption of time and space, but on the results are often not satisfactory. In the future on the study on the algorithm of the TSP should grasp the three aspects: continue to improve existing TSP algorithm, by adopting the idea of artificial intelligence, creating new TSP algorithm, setting the advantages of each algorithm, carrying on the research of hybrid TSP algorithm. At present there are certain achievements. In the near future, there are some better solutions for TSP problem.

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