

WHAT IS CLAIMED IS:

1. A responding method, performed by a server, the method comprising:

performing, based on a parsing result obtained by parsing a user consultation statement, an intent analysis on the user consultation statement in an ontology layer of a pre-established knowledge graph corresponding to the user consultation statement, to obtain an intent analysis result corresponding to the user consultation statement;

performing, based on the intent analysis result, answer address searching in an entity layer of the knowledge graph, to obtain an answer matching the user consultation statement; and

transmitting the answer to a transmitting party and displaying the answer on a display device of a user terminal, the user consultation statement being transmitted from the transmitting party,

wherein the intent analysis result is a knowledge link including an intent anchor,

wherein the performing, based on the intent analysis result, answer address searching in an entity layer of the knowledge graph, to obtain an answer matching the user consultation statement, comprises:

obtaining an entity link corresponding to the user consultation statement, based on the knowledge link including the intent anchor and an entity corresponding to each ontology in the knowledge link;

finding, in the entity layer of the knowledge graph, a minimal subgraph corresponding to the entity link;

deleting entities, relationships or attributes that are not related to the entity link in the minimal subgraph; and

taking out a value on the intent anchor in the remaining entity link as the answer matching the user consultation statement.

2. The method according to claim 1, wherein the performing, based on the parsing result obtained by parsing the user consultation statement, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement, comprises:

determining, according to a preset user consultation statement classification rule, a user consultation statement type of the user consultation statement based on the parsing result; and

performing, according to an intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement.

3. The method according to claim 2, wherein the performing, according to the intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement, comprises:

performing, according to the intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph, to obtain at least two candidate intent analysis results; and

determining, in response to receiving intent confirmation information transmitted by the transmitting party, the intent analysis result corresponding to the user consultation statement from the candidate intent analysis results.

4. The method according to claim 2, wherein the user consultation statement type comprises a second type, wherein a user consultation statement of the second type includes an attribute and an ontology;

the performing, according to the intent analysis rule matching the user

consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement, comprises:

5 acquiring an ontology the attribute included in the user consultation statement belonging thereto;

 adding the acquired ontology the attribute belonging thereto to the ontology included in the user consultation statement; and

10 performing, based on the attribute and the ontology included in the user consultation statement obtained by adding the acquired ontology thereto, the intent analysis on the user consultation statement in the ontology layer, to obtain the intent analysis result corresponding to the user consultation statement.

5. The method according to claim 2, wherein the user consultation statement type comprises a third type, wherein the user consultation statement of the third type
15 includes a relationship and an ontology;

 the performing, according to the intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user
20 consultation statement, comprises:

 acquiring ontologies connected by the relationship included in the user consultation statement;

 adding the acquired ontologies connected by the relationship to the ontology included in the user consultation statement; and

25 performing, based on the relationship and the ontologies included in the user consultation statement obtained after the acquired ontologies are added thereto, the intent analysis on the user consultation statement in the ontology layer, to obtain the intent analysis result corresponding to the user consultation statement.

6. The method according to claim 2, wherein the user consultation statement type comprises a fourth type, wherein the user consultation statement of the fourth type includes an attribute, a relationship, and an ontology;

the performing, according to the intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement, comprises:

acquiring an ontology the attribute included in the user consultation statement belonging thereto and ontologies connected by the relationship included in the user consultation statement;

adding the acquired ontology the attribute belonging thereto and the acquired ontologies connected by the relationship to the ontology included in the user consultation statement; and

performing the intent analysis on the user consultation statement in the ontology layer based on the attribute, the relationship, and the ontology included in the user consultation statement after the acquired ontologies are added thereto, to obtain the intent analysis result corresponding to the user consultation statement.

7. The method according to claim 1, wherein the performing, based on the parsing result obtained by parsing the user consultation statement, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement, comprises:

performing, based on the parsing result obtained by parsing the user consultation statement, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain at least two candidate intent analysis results; and

determining, in response to receiving intent confirmation information transmitted by the transmitting party, the intent analysis result corresponding to the

user consultation statement from the candidate intent analysis results.

8. A responding apparatus, provided in a server, the apparatus comprising:

an intent analysis unit, configured to perform, based on a parsing result obtained by parsing a user consultation statement, an intent analysis on the user consultation statement in an ontology layer of a pre-established knowledge graph corresponding to the user consultation statement, to obtain an intent analysis result corresponding to the user consultation statement;

an answer address searching unit, configured to perform, based on the intent analysis result, answer address searching in an entity layer of the knowledge graph, to obtain an answer matching the user consultation statement; and

an answer transmitting unit, configured to transmit the answer to a transmitting party and displaying the answer on a display device of a user terminal, the user consultation statement being from the transmitting party,

wherein the intent analysis result is a knowledge link including an intent anchor,

wherein the an answer address searching unit is further configured to:

obtain an entity link corresponding to the user consultation statement, based on the knowledge link including the intent anchor and an entity corresponding to each ontology in the knowledge link;

find, in the entity layer of the knowledge graph, a minimal subgraph corresponding to the entity link;

delete entities, relationships or attributes that are not related to the entity link in the minimal subgraph; and

take out a value on the intent anchor in the remaining entity link as the answer matching the user consultation statement.

9. The apparatus according to claim 8, wherein the intent analysis unit comprises:

a user consultation statement type determination subunit, configured to determine, according to a preset user consultation statement classification rule, a user consultation statement type of the user consultation statement based on the parsing result; and

5 an intent analysis subunit, configured to perform, according to an intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain the intent analysis result corresponding to the user consultation statement.

10 10. The apparatus according to claim 9, wherein the intent analysis unit comprises:

 an intent analysis module, configured to perform, according to the intent analysis rule matching the user consultation statement type, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph, to obtain at least two candidate intent analysis results; and

15 an intent determination module, configured to determine, in response to receiving intent confirmation information transmitted by the transmitting party, the intent analysis result corresponding to the user consultation statement from the candidate intent analysis results.

20 11. The apparatus according to claim 9, wherein the user consultation statement type comprises a second type, wherein the second type of the user consultation statement includes an attribute and an ontology;

 the intent analysis subunit comprises:

 a second ontology acquisition module, configured to acquire an ontology the attribute included in the user consultation statement belonging thereto;

25 a second ontology adding module, configured to add the acquired ontology the attribute belonging thereto to the ontology included in the user consultation statement; and

 a second intent analysis module, configured to perform, based on the attribute

and the ontology included in the user consultation statement obtained by adding the acquired ontology thereto, the intent analysis on the user consultation statement in the ontology layer, to obtain the intent analysis result corresponding to the user consultation statement.

- 5 12. The apparatus according to claim 9, wherein the user consultation statement type comprises a third type, wherein the user consultation statement of the third type includes a relationship and an ontology;

10 the intent analysis subunit comprises: a third ontology acquisition module, configured to acquire ontologies connected by the relationship included in the user consultation statement;

 a third ontology adding module, configured to add the acquired ontologies connected by the relationship to the ontology included in the user consultation statement; and

15 a third intent analysis module, configured to perform, based on the relationship and the ontologies included in the user consultation statement obtained after the acquired ontologies are added thereto, the intent analysis on the user consultation statement in the ontology layer, to obtain the intent analysis result corresponding to the user consultation statement.

- 20 13. The apparatus according to claim 9, wherein the user consultation statement type comprises a fourth type, wherein the user consultation statement of the fourth type comprises an attribute, a relationship and an ontology;

 the intent analysis subunit comprises:

25 a fourth ontology acquisition module, configured to acquire an ontology the attribute included in the user consultation statement belonging thereto and an ontology connected by the relationship included in the user consultation statement;

 a fourth ontology adding module, configured to add the acquired the acquired ontology the attribute belonging thereto and the acquired ontologies connected by the relationship to the ontology included in the user consultation statement; and

a fourth intent analysis module, configured to perform the intent analysis on the user consultation statement in the ontology layer based on the attribute, the relationship, and the ontology included in the user consultation statement after the acquired ontologies are added thereto, to obtain the intent analysis result corresponding to the user consultation statement.

14. The apparatus according to claim 8, wherein the intent analysis unit comprises:

a candidate intent analysis subunit, configured to perform, based on the parsing result obtained by parsing the user consultation statement, the intent analysis on the user consultation statement in the ontology layer of the pre-established knowledge graph corresponding to the user consultation statement, to obtain at least two candidate intent analysis results; and

an intent determination subunit, configured to determine, in response to receiving intent confirmation information transmitted by the transmitting party, the intent analysis result corresponding to the user consultation statement from the candidate intent analysis results.

15. A terminal, comprising:

one or more processors; and

a storage apparatus, for storing one or more programs,

the one or more programs, when executed by the one or more processors, cause the one or more processors to implement the responding method according to any one of claims 1-7.

16. A computer readable storage medium, storing a computer program thereon, the computer program, when executed by a processor, implements the responding method according to any one of claims 1-7.

17. A computer program product, comprising a computer program stored on a computer readable storage medium, the computer program comprising program instructions, the program instructions, when executed by a processor, implement the responding method according to any one of claims 1-7.