

Figure 34 – Mapping Tool (Beta Version)

The proposed tool which is presented in the Figure 34, has already a beta version available where it is possible to establish mapping between terms. This figure has defined 4 sections where in the section a) the user can select terms to map from the open ontologies and in the section b) appears the selected terms annotation. If the user identifies semantic similarities, he can establish the mapping through the buttons present in the section c). In the section d) it is facilitated the access to the furniture funStep dictionary for human consulting.

This tool uses a mediator ontology which is already able to represent ontology semantic operations: semantic mismatches; semantic transformations; mappings; and other ontologies operations (e.g. versioning) [17]. The next version of the tool should be able to establish other semantic operations than the classes mappings already presented in the beta version.

One of the applications of such semantic operations logs is to use such information for semantic translation. The example of Figure 35 shows what happens to a message with a product request sent to Enterprise B. The mediator ontology is used to get the "semantic translation" of the terms present in a message, which uses syntax accordingly to the funStep ontology, to the equivalent syntax used in the Enterprise B. The request of Compact Beds with Light Decorations, is "translated" to a request of a Juvenile Bed that have the Electric Equipment attribute as a Lightning Decoration.

```

<message from="client" to="Enterprise B">
  <translated> no </translated>
  <getProduct>
    <Bed>
      <Compact Bed>
        <Decoration> Lights </Decoration>
      </ Compact Bed >
    </ Bed >
  </getProduct>
</message>
  
```

Before Mediator's translation

```

<message from="client" to="Enterprise B">
  
```

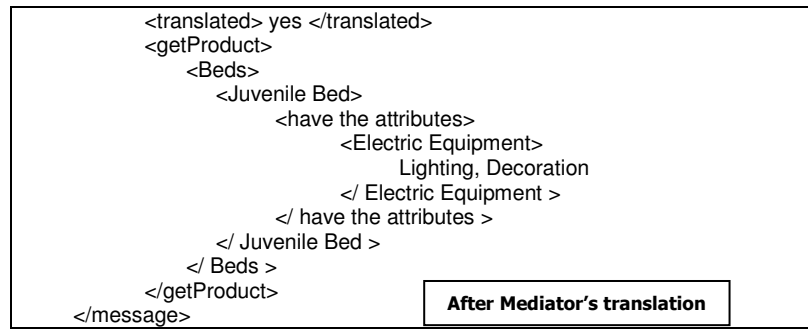


Figure 35 – Mediator's Message Translation Example

One obvious advantage of this scenario is that this mechanism will enable the computational systems of any enterprise to smoothly communicate with external parties using syntax and semantic present in the reference ontology. This is also the main motivation that Enterprises may consider to join using the funStep ontology as a reference in the furniture market.