

## Transformative Relations

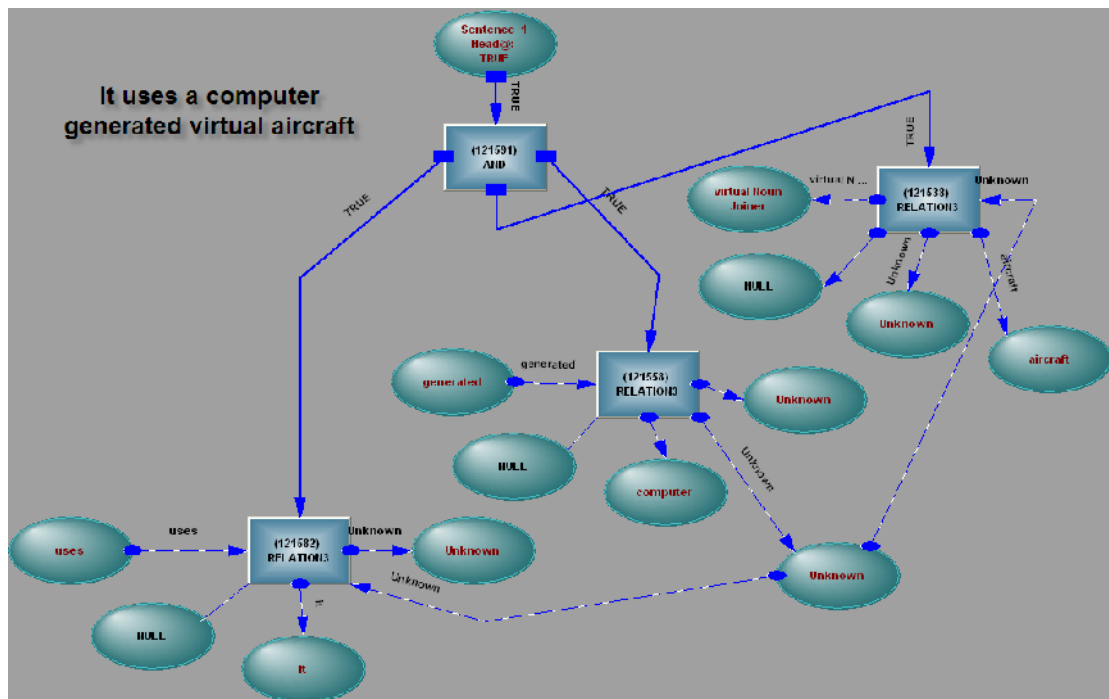
The last noun in a noun phrase is usually the point on which the other descriptors are anchored. Some relations transform an object into a new object, and this new object becomes the target of other parts of the noun phrase.

“A virtual aircraft”

We started with “aircraft” – a physical object. “Virtual aircraft” has become an image – it has lost the properties of mass and extension in three dimensions.

“A computer generated virtual aircraft”

The “generated” relation applies to the image, not the aircraft.



“A computer generated three dimensional virtual aircraft”

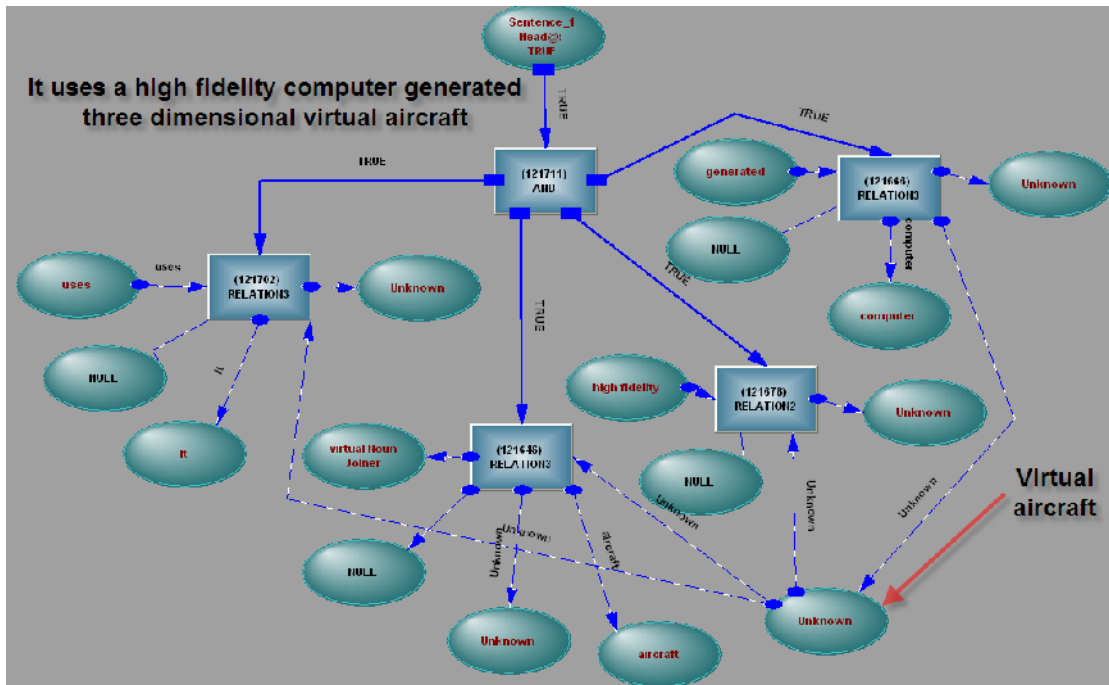
“three dimensional” acts as an adjective on the new object.

“A high fidelity computer generated three dimensional virtual aircraft”

The inclusion of “high fidelity” introduces a new problem. The structure is initially recognised as two noun phrases separated by an interim participial. The “high fidelity computer” noun phrase will already have been constructed, in the belief that “high fidelity” refers to the computer, as that is all that can be seen. We would need to prevent resolution of the noun phrase structure while it is followed by an interim past participial. We cannot rely on there being nouns, and a potentially splittable noun phrase – an adjective like “accurate” would have the same problem – it refers across the participial, rather than to the noun it precedes.

“An accurate computer generated three dimensional virtual aircraft”

The noun phrase before the interim participial can be made an InterimNounPhrase, and not be resolved. It can then be resolved on the back of the participial.



The result is that “virtual aircraft” creates a new object, which becomes the target of other relations in the noun phrase.