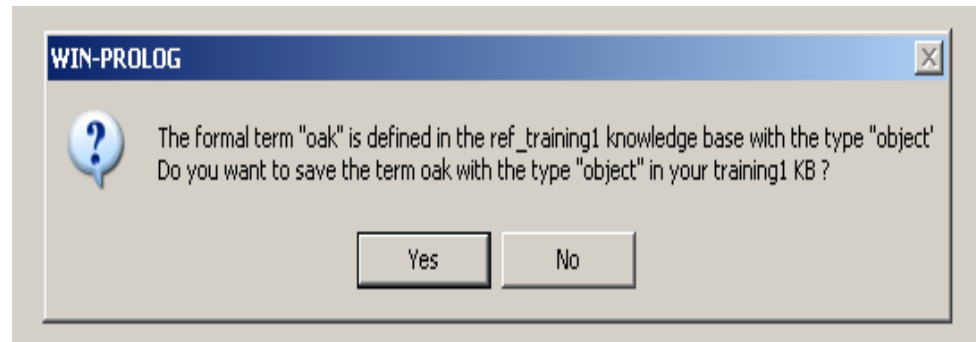# Reference knowledge bases

Purpose

- In order to compare knowledge contained within separate knowledge bases it is helpful if common terms (i.e. terms that are used the same way and have the <u>same meaning</u>) are represented consistently in all relevant knowledge bases.

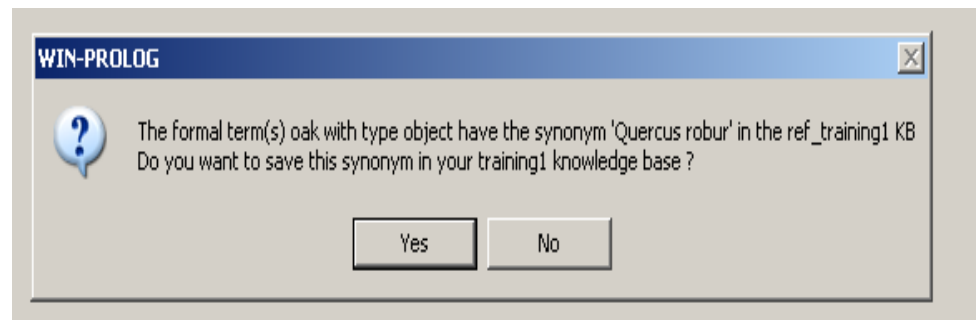- Reference knowledge bases were designed to facilitate this process.

How they work

- A reference knowledge base is essentially a collection of formal terms and is kept open whilst the user is developing a new knowledge base.

- Whenever a new formal term is created either directly or via a new statement in the new knowledge base, AKT5 checks if that formal term (or a synonym) is already in use by the reference KB.

- If the formal term is already in use, AKT5 will inform the user that the reference KB uses the formal term or synonym, the formal term type and the synonyms used.

WIN-PROLOG

The formal term "oak" is defined in the ref_training1 knowledge base with the type "object'
Do you want to save the term oak with the type "object" in your training1 KB ?

Yes   No

- The user then has various options to redefine the formal term in their KB having been warned about its preferred mode of use.

WIN-PROLOG

The formal term(s) oak with type object have the synonym 'Quercus robur' in the ref_training1 KB
Do you want to save this synonym in your training1 knowledge base ?

Yes   No

Reference KB creation

- Collect a list of key terms that ideally could be represented consistently across the knowledge bases.

- Create a new knowledge base of these terms - using the formal terms option from the kb menu.

- When you are happy with it save it with a ref_ prefix e.g. 'ref_whatever.kb'

- You cannot alter a reference KB once you have saved it with 'ref' in the title so it is a good idea to keep an editable copy with a different name)

Key points

- You can have more then one reference kb open at once.

- Acceptance of the term as suggested by the reference kb is <u>optional</u>. You are free to enter terms in any manner you choose.

- The use of AKT5's comparative analysis tools are greatly facilitated if terms are used consistently between knowledge bases where it is appropriate to do so.