4.5 Data System - Linked Libraries

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Append and Link

These functions help you reuse materials, objects and other *data-blocks* loaded from an external source `.blend` file. You can build libraries of common content and share them across multiple referencing files.

Link creates a reference to the data in the source file such that changes made there will be reflected in the referencing file the next time it is reloaded.

Where as *Append* makes a full copy of the data into your `.blend`. You can make further edits to your local copy of the data, but changes in the external source file will not be reflected in the referencing file.

Reference
Mode: All Modes Menu: *File –> Append or Link* Hotkey: `Shift-F1` or `Ctrl-Alt-O`

In the *File Browser* window navigate to the external source `.blend` file and select the data-block you want to reuse.

Options:

Relative Path
: Available only when linking, see *relative paths*.

Select
: Makes the object *Active* after it is loaded.

Active Layer
: Enabled by default, the object is assigned to the visible layers in your scene. Otherwise, it is assigned to the same layers it resides on in the source file.

Instance Groups
: This option links the Group to an object, adding it to the active scene.

When you select an Object type, it will be placed in your scene at the cursor. Many other data types - cameras, curves, and materials for example - must be linked to an object before they become visible.

Newly added Group types are available in Add ‣ Group Instances in 3D View, or for NodeTree groups, the same menu in the Node Editor.

Look in the Outliner, with display mode set to *Blender File*, to see all your linked and appended data-blocks. `Ctrl-LMB` on a file name allows you to redirect a link to another file.

Hint

You cannot move a linked object. Its position is defined in its source file.

If you want to modify the object locally you can either:

Use *Dupli-Groups*

> Instead of linking in *Objects* directly, its often more useful to link in *Groups*, which can be assigned to empties and moved, while maintaining the link to the original file.
>
> Its also useful to be able to add/remove objects from the group without having to manage linking in multiple objects.

Make Objects Local

> Use Object ‣ Make Local ‣ Selected Objects to make the position editable.
>
> This means that object data (animation, constraints, modifiers...) will be local to your `.blend` file. But the object-data will still be linked and remain immutable.

Note

Appending data you already have linked, will add objects / groups to the scene, but will keep them linked (and un-editable).

This is done so existing relationships with linked data remain intact.

Proxy Objects

Used with rigged models, proxy objects, allow specified bone layers to be linked back to the source file while the remainder of the object and its skeleton are edited locally.

`Ctrl-Alt-P` makes the active linked object into a local proxy, appending *_proxy* to its name.

Set the *Protected Layers* in the source file using using the Skeleton panel of the Armatures tab. See Armature Layers. The bones in protected layers will have their position restored from the source file when the referencing file is reloaded.

Known Limitations

For the most part linking data will work as expected, however there are some corner-cases which aren’t supported.

Circular Dependencies

In general dependencies shouldn’t go in both directions.

Attempting to link or append data which links back to the current file will likely result in missing links.

Object Rigid-Body Constraints

When linking objects **directly** into a `.blend` file, the *Rigid Body* settings won't be linked in since they're associated with their scenes world.

As an alternative you could link in the entire scene and set it as a Background Set Scene.