In general, access is a 2 step procedure. An object is first obtained from a directory in a closed state. This action will be the same for all kinds of objects. The closed form of the object can then be opened, and this action will vary for different kinds of objects.

The closed form of an object will be a special type of capability, (a different type for each kind of object). The option bit field of the access capability will carry the options for the opened form of the object. The data field (a fullword) carries sufficient information to describe the object. This will be the identical data carried in the object part of an ownership entry in a directory.

The option bit field is associated with the appropriate access key in the access list. (or the implicit options bits)

The implicit options are accessed when a null access key is presented and the directory capability has the ownership bit on.
II) entry construction and object creation

A) ownership entry

An ownership entry and the object itself are created simultaneously. This action will vary for different kinds of objects. The scratch bit is set at this time also.

B) hard link entry

This action will be common to all kinds of objects, and is accomplished by presenting the closed version of the object.

C) soft link entry

This action is not really related to the object at all. It is accomplished by presenting a closed version of a directory, a closed version of an access key, and a text name.

In all of these cases, of course, a directory (open) do contain the entry and a text name for the entry must be presented.

Also, no ownership entry can be made in a directory without the prep-option bit, and this bit must differ from that giving implicit access to owned objects in a directory. This is to permit subprocesses to construct scattered objects without giving them access to
all objects in the directory. Thus it would seem that if an
ownership entry is constructed with the scratch
bit on, an entry in the access list must be made simultaneously.
It would appear that there are 2 creation actions for
each kind of object. One creates a non scratch entry,
and the other creates a scratch entry with a non empty
access list.
III) entry and object destruction

4) ownership entry

destroys both the entry and the object.

can always be done via the implicit access key, whether
or not the scratch bit is on. Can also be done via any
access key with the proper associated permission bit on.

5) hard link entry

destroys only the entry. Needs a directory capability with
ownership bit on.

6) soft link entry

Same as 6. 