

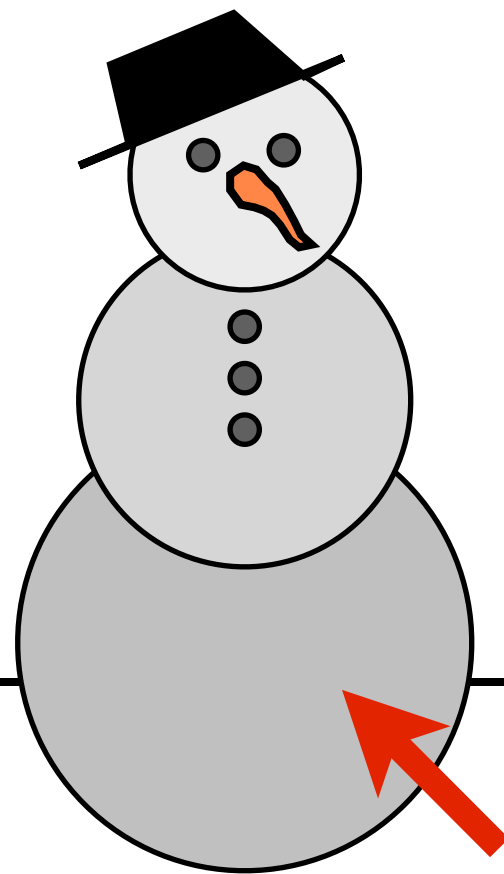
# The Art of Graphics Programming

*Technical Context*

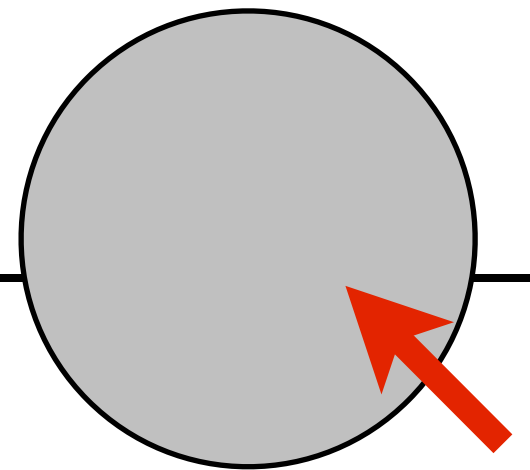
## Scenegraph Overview

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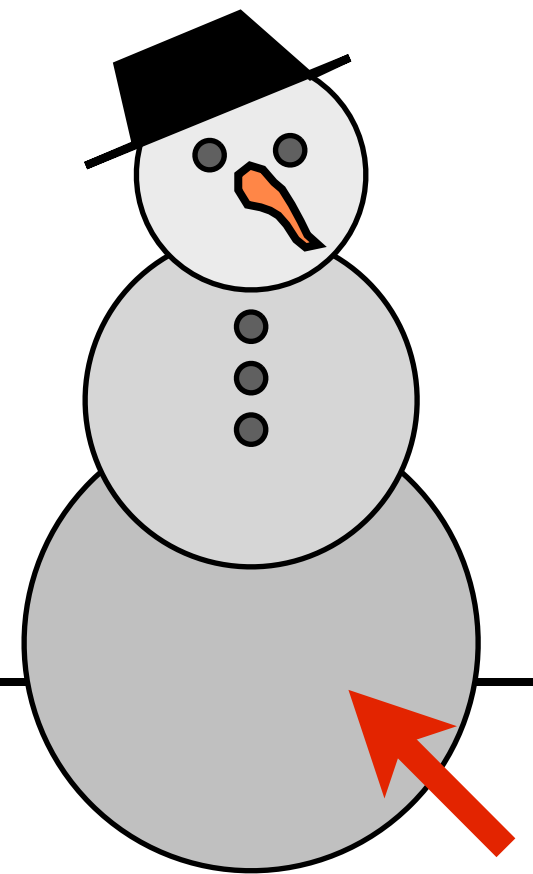
# What if we want to move this snowman?



We probably don't want this:



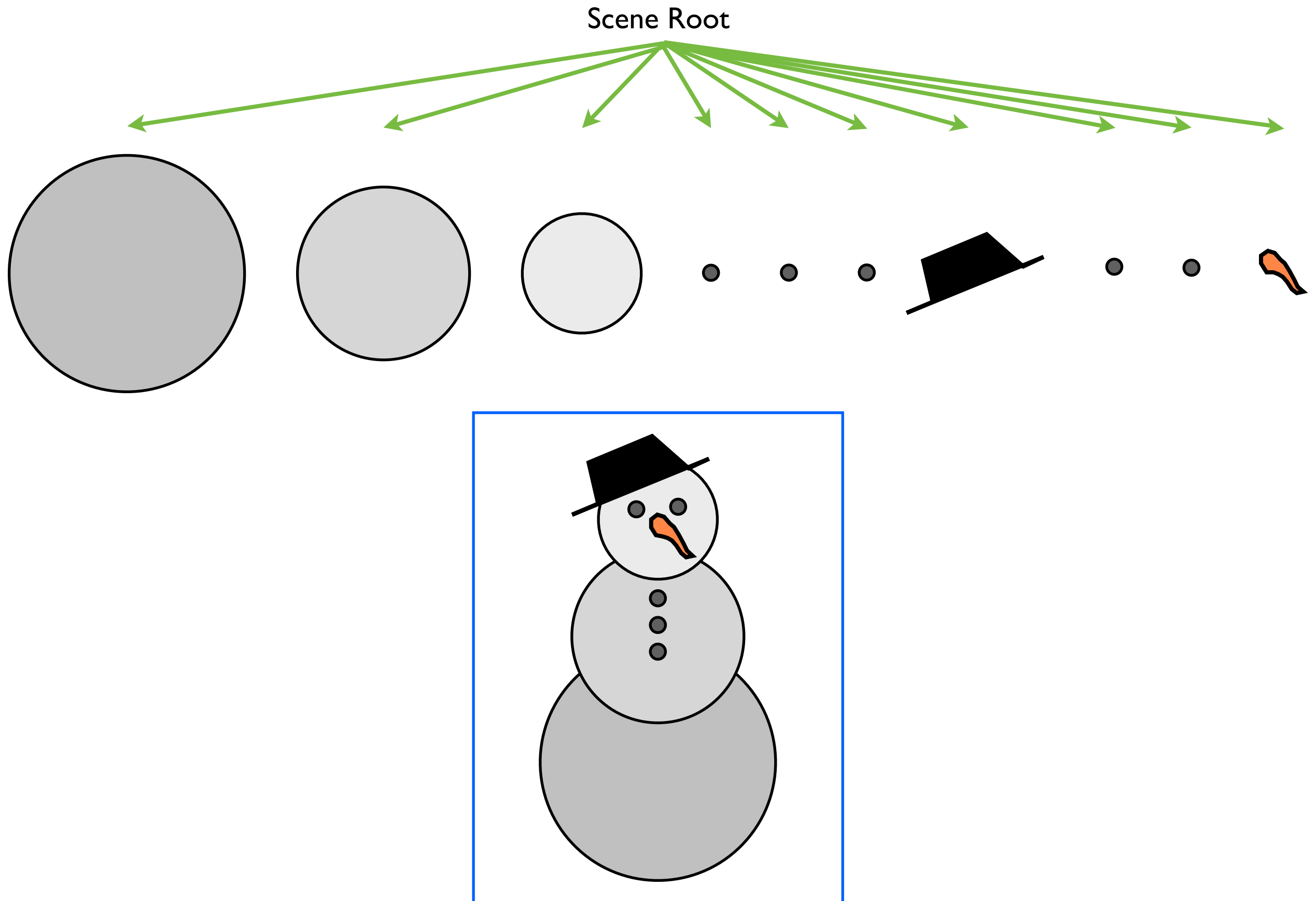
We want this:



In the first interaction, the parts of the snowman were stored non-hierarchically in a single array.

To move the entire snowman, we would need to move each component individually.

# Non-Hierarchical Scene Structure



In the second interaction, the snowman moved as a single object when we grabbed it by its base component.

To achieve this, we used a hierarchical organization of component objects, called a *scenegraph*.

# Scenegraph Hierarchy

