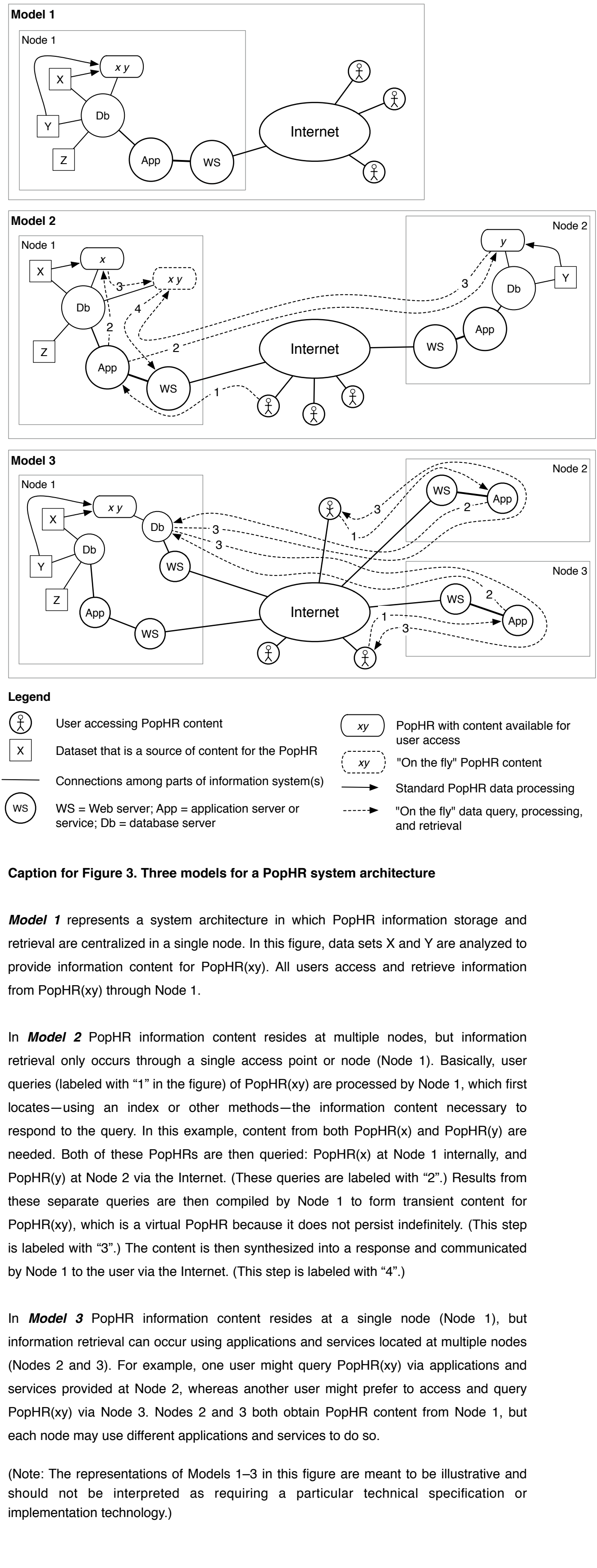
Figure 3. Three models for a PopHR system architecture



Caption for Figure 3. Three models for a PopHR system architecture

Model 1 represents a system architecture in which PopHR information storage and retrieval are centralized in a single node. In this figure, data sets X and Y are analyzed to provide information content for PopHR(xy). All users access and retrieve information from PopHR(xy) through Node 1.

In ***Model 2*** PopHR information content resides at multiple nodes, but information retrieval only occurs through a single access point or node (Node 1). Basically, user queries (labeled with "1" in the figure) of PopHR(xy) are processed by Node 1, which first locates—using an index or other methods—the information content necessary to respond to the query. In this example, content from both PopHR(x) and PopHR(y) are needed. Both of these PopHRs are then queried: PopHR(x) at Node 1 internally, and PopHR(y) at Node 2 via the Internet. (These queries are labeled with "2".) Results from these separate queries are then compiled by Node 1 to form transient content for PopHR(xy), which is a virtual PopHR because it does not persist indefinitely. (This step is labeled with "3".) The content is then synthesized into a response and communicated by Node 1 to the user via the Internet. (This step is labeled with "4".)

In ***Model 3*** PopHR information content resides at a single node (Node 1), but information retrieval can occur using applications and services located at multiple nodes (Nodes 2 and 3). For example, one user might query PopHR(xy) via applications and services provided at Node 2, whereas another user might prefer to access and query PopHR(xy) via Node 3. Nodes 2 and 3 both obtain PopHR content from Node 1, but each node may use different applications and services to do so.

(Note: The representations of Models 1–3 in this figure are meant to be illustrative and should not be interpreted as requiring a particular technical specification or implementation technology.)