

Science Knowledge and Education Network

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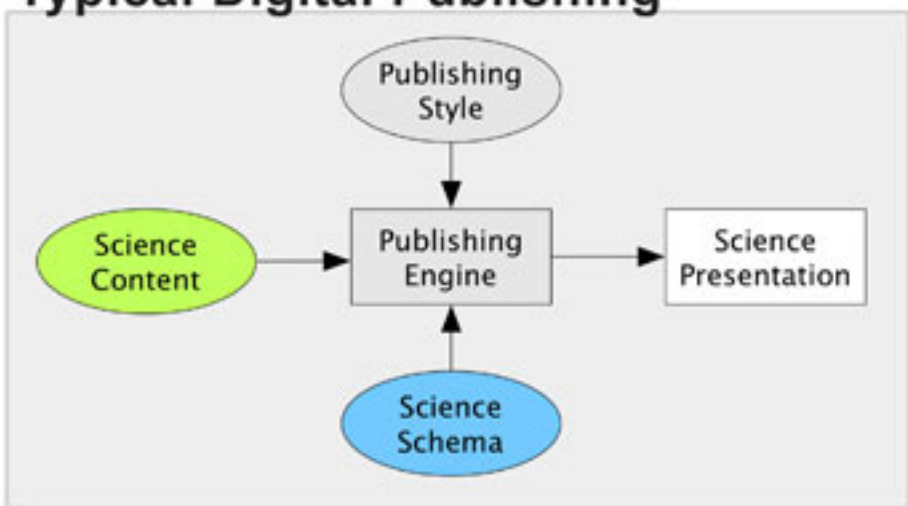
Abstract

Our goal is to develop an open-source framework to create a knowledge and education network—a new and powerful application, called a Scientific Knowledge and Education Network (SKEN) for building dynamic collaborative communities centered around primary scientific references. To do this we will expand traditional, content-based scientific information into a community-based information exchange and provide an innovative mechanism for blending science knowledge with opportunities for formal and informal

science education. This transforms primary scientific references into "living" publications that include the most current information, produced by experts on their topics, and allow continuous annotations of the content through community input from both researchers and members of the public. By ensuring that all scientific communities implementing the SKEN architecture become part of the NSDL infrastructure, this project will provide easy cross-fertilization of scientific disciplines.

SKEN: Description of the Open-source Framework

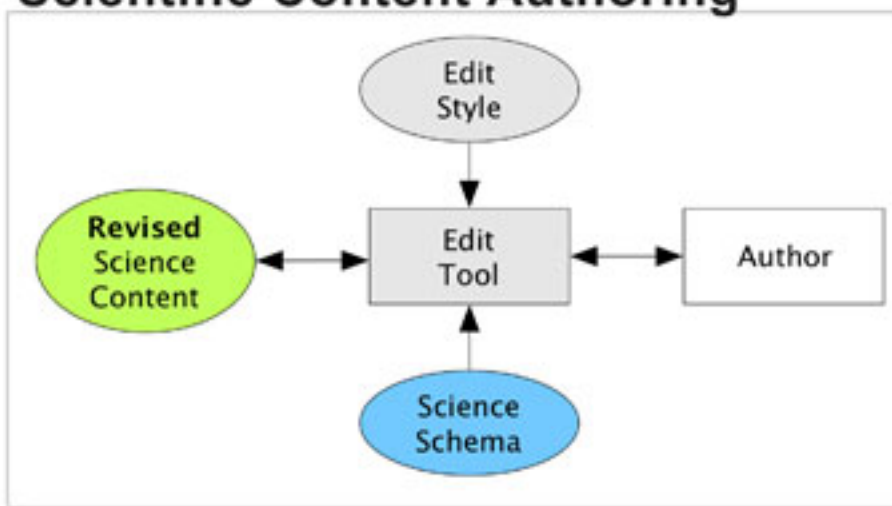
Typical Digital Publishing



Science Content

- Prose
 - References
 - Charts/Graphs
 - Tables
 - Figures
 - Rich Media
- images
sound
video
animation
simulations
visualization

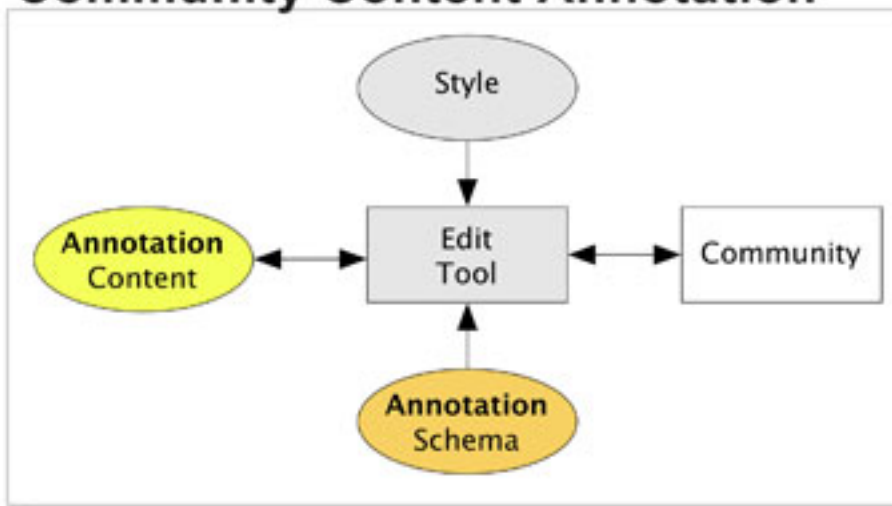
Scientific Content Authoring



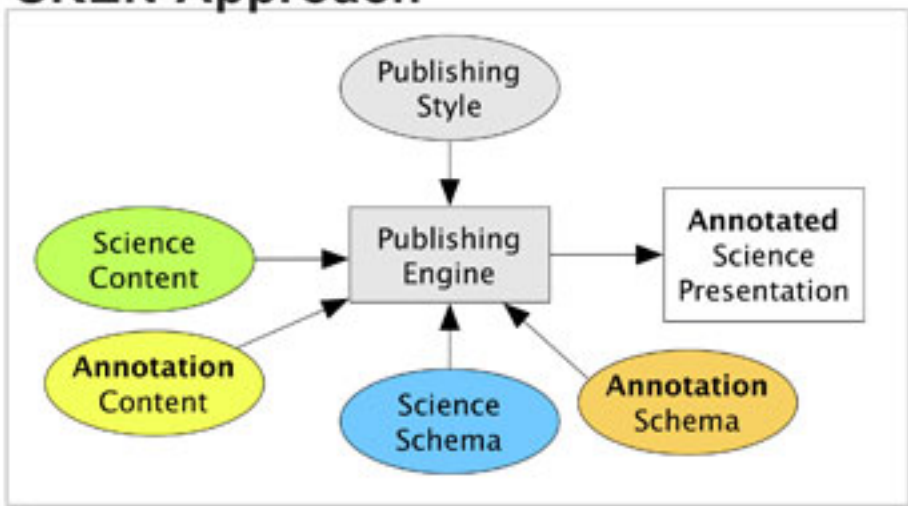
Community Content

- Content Compilations
play lists
reading lists
- Annotations
comments
reviews
questions
discussions
unpublished findings
unpublished data

Community Content Annotation



SKEN Approach



Harvested Content

- Recent Publications (OAI-PMH)
- Science Newsfeeds

The Content Management System

Plone

home | about | news | downloads | documentation | development | foundation

Plone is a content management framework that works hand-in-hand and sits on top of Zope, a widely used Open Source web application server and development system.

Zope itself is written in Python, an easy-to-learn, widely used and supported Open Source programming language. Python can be used to add new features to Plone, and used to understand or make changes to the way that Zope and Plone work.

Plone runs on Windows, Linux, BSD, Mac OS X, and many other platforms; easy click installers are available for Windows and Mac OS X, and RPM packages are available for Linux.

By default, Plone stores its contents in Zope's built-in transactional object database, the ZODB. There are products and techniques, however, to share information with other sources, such as relational databases, LDAP, filesystem files, etc.

plone.org

Demonstration Case

THE BIRDS OF NORTH AMERICA *online*
bna.birds.cornell.edu

Yellow Warbler

Dendroica petechia

French: Paruline jaune, Fauvette jaune
Spanish: Verdín Amarillo, Chipe amarillo

Authors: F. E. LUTWIDGE, C. CELADA, R. K. ALLEN, C. C. ANNESS, D. A. SPECTOR

Species Account | References | Sound & Video | Image Gallery

INTRODUCTION

A species of yellow in a patch of yellow. Affly named, the Yellow Warbler is found throughout much of North America in habitats briefly categorized as wet, deciduous forests. One common feature of Yellow Warbler habitat is the presence of various species of yellow (Dale 1991), which dominate regions with high densities of Yellow Warblers, as in southern Canada, and regions where the species is sparse and local in distribution, as in the southeastern U.S. For populations of Yellow Warblers south of U.S. borders, mangroves are a dominant feature of their habitat.

The Yellow Warbler is the most strikingly yellow of North American warblers. Traditionally, the various subspecies have been arranged into 3 groups mainly based on the color of the head in adult males and have been recognized in the past as distinct species (see [Bridges 2003](#)), even though these groups may not reflect underlying evolutionary relationships: yellow Warbler (Lutescens group)—yellow-headed, migratory forms breeding in North America; Golden Warbler (Petrochelidon group)—orange-throated, resident forms in the West Indies and Mangrove Warbler (Petrochelidon group)—orange-headed, resident forms of coastal Middle and northern South America. Unless otherwise indicated, this account emphasizes the biology of the entire group, referred to simply as Yellow Warbler; Golden Warbler and Mangrove Warbler will identify specifically those migratory groups.

Abundant and widespread, having the broadest distribution of any *Dendroica* warbler, the yellow

The Birds of North America (BNA) is a series that provides detailed scientific information (18 volumes, 18,000 pages in total) for each of the 716 species of birds nesting in the USA and Canada. The print version of BNA was completed in 2002.

As an online project, BNA is poised to become a living resource. Account contents will be updated frequently, with online-coordinated contributions from researchers, citizen scientists, and designated reviewers and editors.

Features

- Library of digital images
- Searchable database
- Continually updated
- Linked references
- Video and sound

