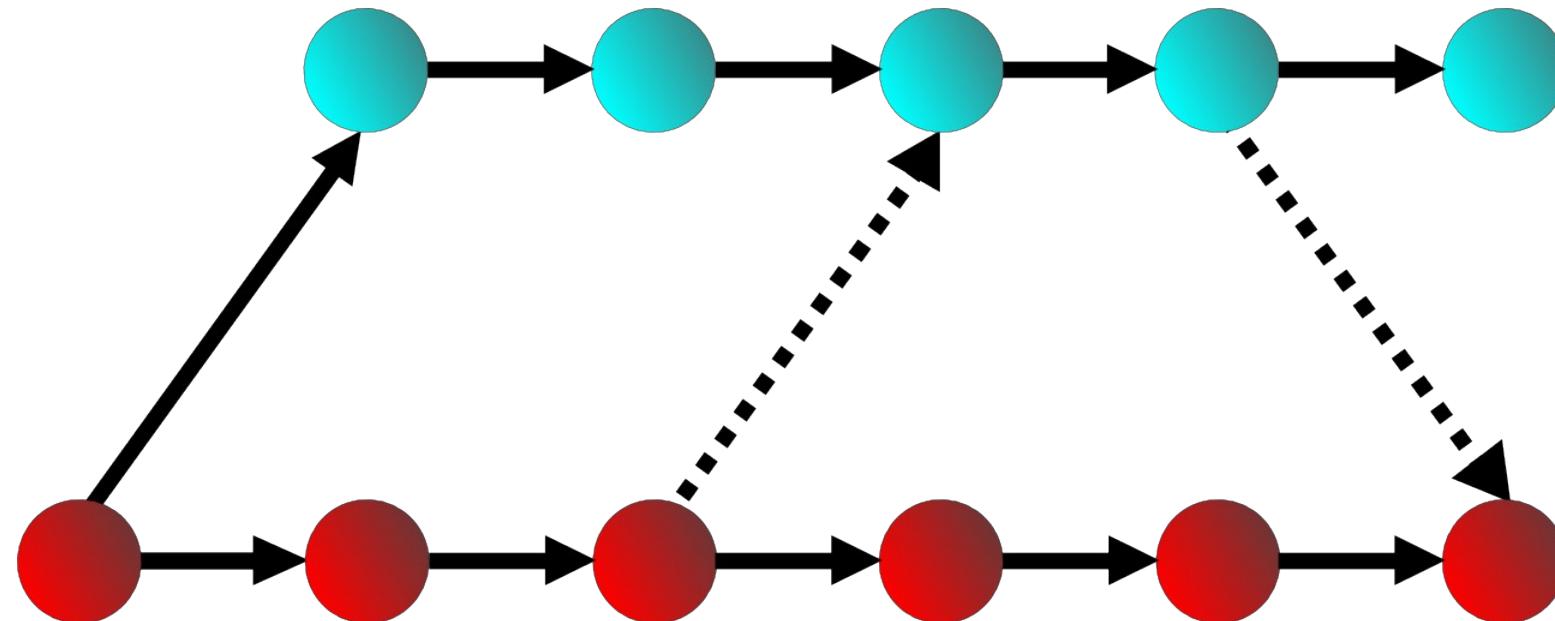


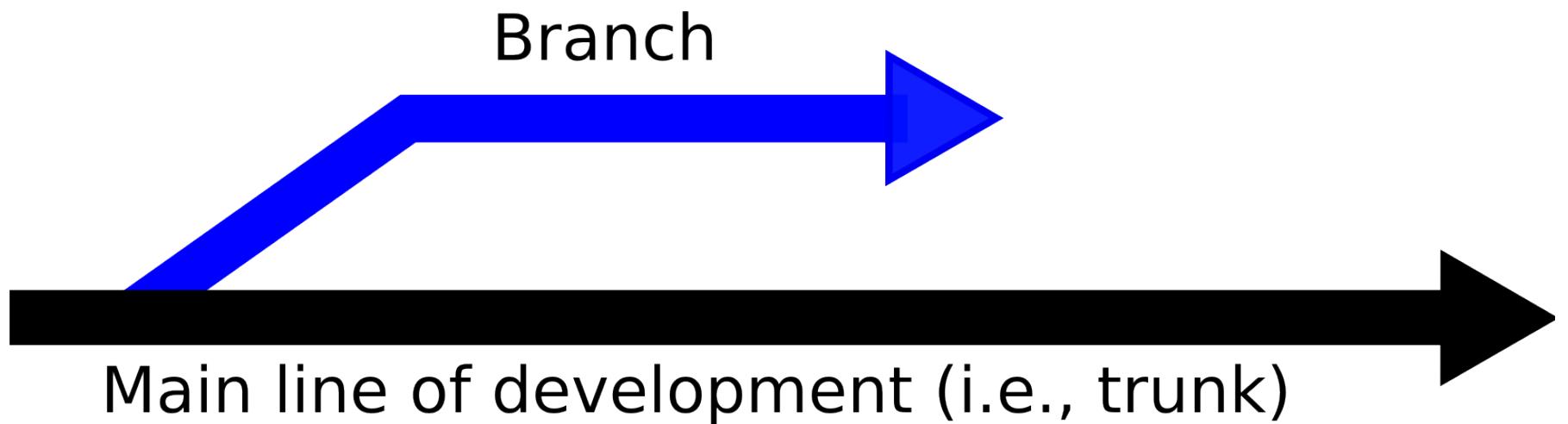
Resonant Divergence Collaboration in Diverged Branches



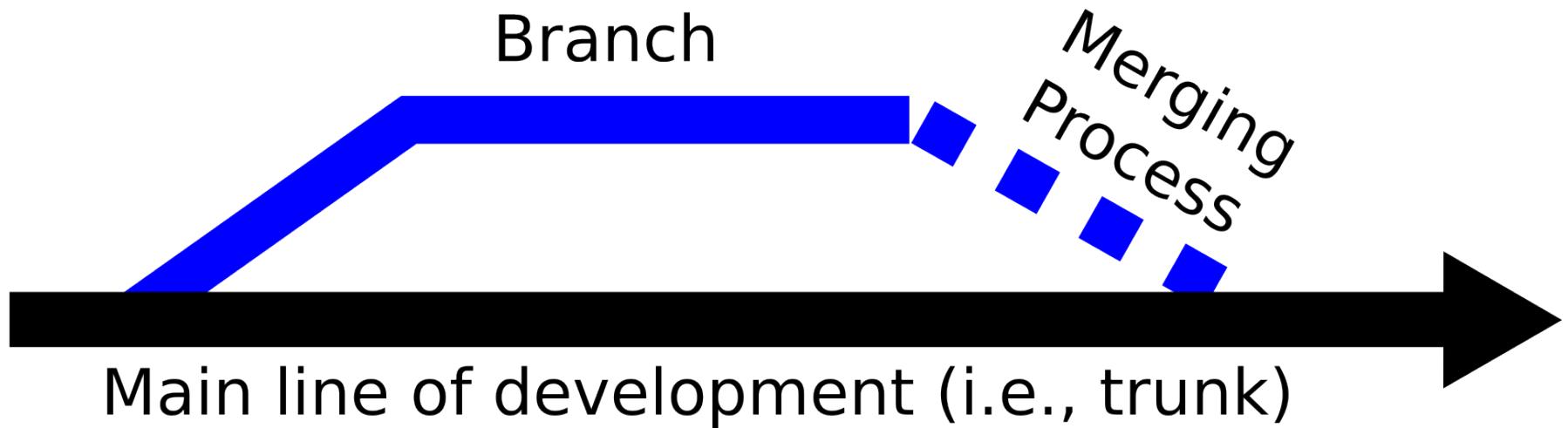
Benjamin Mako Hill
<http://mako.cc>

MIT Media Lab
Electronic Publishing Group
Computing Culture Group

Branching Basics



Merging Basics



The Goal

Multiple Goals

The Applications

- I. Offline Work
- II. Stable Versions
- III. Permanent Divergence

State of the Art: Diff

The screenshot shows a web browser window comparing two revisions of a Wikipedia article titled "Revision control".

Revision as of 03:14, 14 July 2007 (edit)
Michael Allan (Talk | contribs)
(→File locking - turn down heat)
← Older edit

Current revision (07:10, 15 July 2007) (edit) (undo)
149.99.63.74 (Talk) [rollback]
(→Distributed revision control - simplify sentence)

Line 46:
== Distributed revision control ==
- Distributed revision control **systems take** a peer-to-peer approach,
as opposed to the client-server approach of centralized systems.
Rather than a single, central repository on which clients
synchronize,

Line 46:
== Distributed revision control ==
+ Distributed revision control **takes** a peer-to-peer approach,
as opposed to the client-server approach of centralized systems.
Rather than a single, central repository on which clients
synchronize,

Current revision

Revision control (also known as **version control**, **source control** or **(source) code management (SCM)**) is the management of multiple revisions of the same unit of information. It is most commonly used in [engineering](#) and [software development](#) to manage ongoing development of digital documents like application [source code](#), art resources such as [blueprints](#) or electronic models and other critical information that may be worked on by a team of people. Changes to these documents are identified by incrementing an associated number or letter code, termed the "revision number", "revision level", or simply "[revision](#)" and associated historically with the person making the change. A simple form of revision control, for example, has the initial issue of a drawing assigned the revision number "1". When the first change is made, the revision number is incremented to "2" and so on.

[Software tools for revision control](#) are increasingly recognized as being necessary for the organization of multi-developer projects. [\[1\]](#)

[edit] Overview

State of the Art: Software Merge Tools

The screenshot shows a software merge tool interface with two main panes. The top pane displays two blocks of text, labeled A and B. The bottom pane shows the merged result, labeled C. The interface includes a menu bar (File, Edit, Options, Buffers, Tools, Help) and a toolbar with various icons.

Panes:

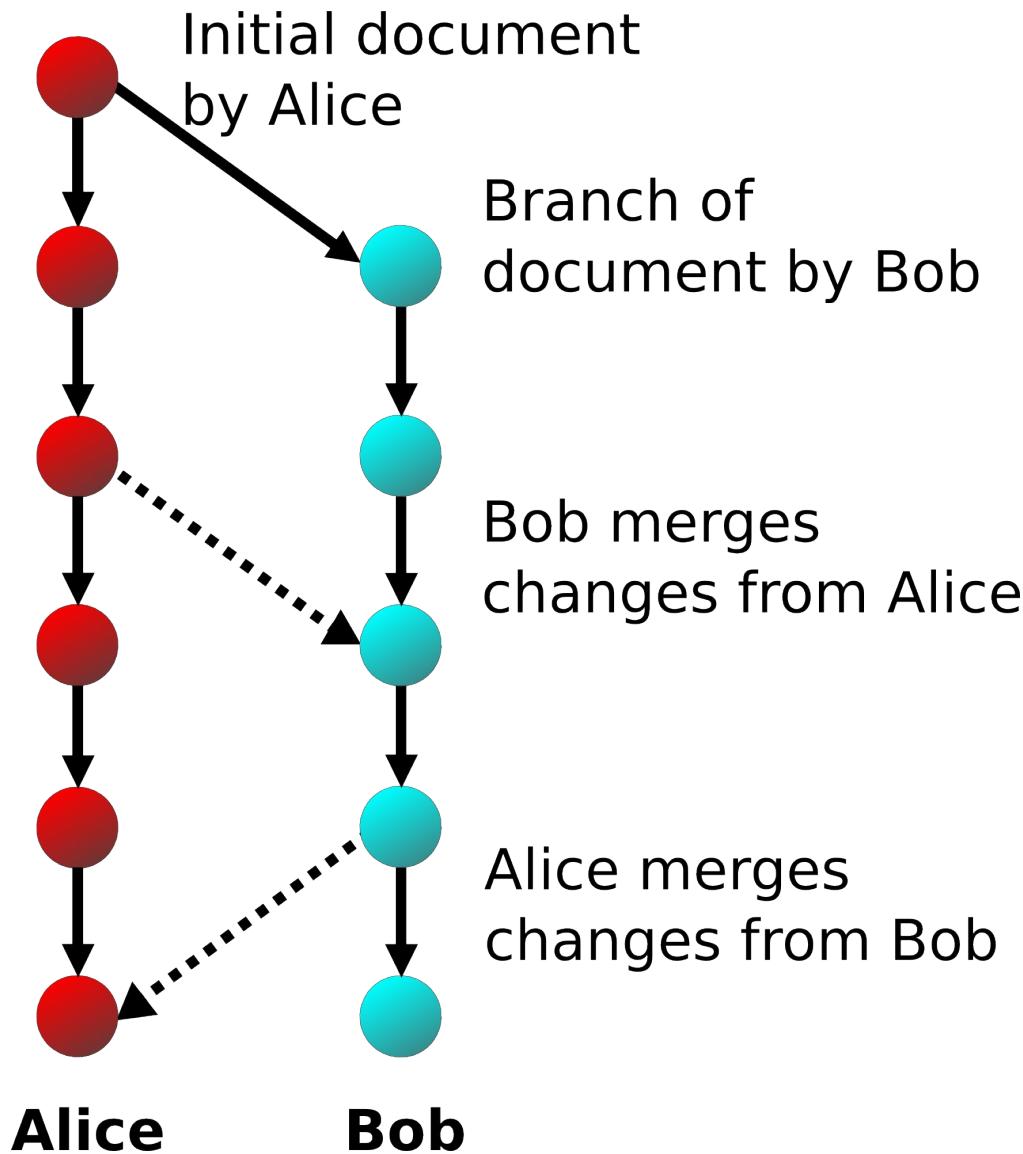
- A: --:%% body_text.txt.THIS (Fundamental)--L**
Ut enim ad minim veniam, quis nostrud exercitatu...
Ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

A: <<<<< variant A
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
A: >>>>> variant B
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
A: ##### Ancestor
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt
- B: --:%% body_text.txt.OTHER (Fundamental)--R**
Quis aute irure dolor in reprehenderit in volu...
dolore eu fugiat nulla pariatur. Excepteur sint proident, sunt in culpa qui officia deserunt m...
- C: [=diff(A+B) combined] -u:-- *ediff-merge* (Fundamental)--L1--Top-----**

What are Wikis Missing?

- I. Merging
- II. History Sensative Merging
- III. Branch “Accounting”
- IV. Conflict Representation
and Resolution
- V. Text Specific Interfaces

History Sensitive Merging



A Wiki That Has...

- Branch Accounting
- History Sensitive Merging
 - Conflict Resolution

And Work Toward...

- Using Mediawiki Articles as Branches
 - Integration *Into* Other Wikis

Quick Demo

Python: Wiki, Document Model, Diff

Bazaar: Differential Storage, Merge Algorithm

Javascript: Conflict Resolution, Rendering

Where To Get It!

<http://mako.cc>

<http://mako.cc/copyrighteous>