

Assembling ENDF/B-VII.1beta0

Mike Herman
National Nuclear Data Center
Brookhaven National Laboratory

mwherman@bnl.gov

ENDF/B-VII.1beta0 release Oct. 22, 2010 4:37p.m.

Neutron sublibrary

Total number of materials	411
New or revised materials	125
Totally or partially new materials	37
- LANL	8
- LANL/ORNL	7
- ORNL	9
- ORNL/IAEA	6
- BNL	1
- LLNL	6
Bob Little's fixes	7
Other fixes	16
Adopted:	65
- Actinoid file	58
- JENDL-3.3 (R.Q. Wright corr.)	2
- JENDL-4.0	1
- JEFF-3.3 (R.Q. Wright corr.)	4



New evaluations

(see also full list in the booklet)

BNL

no covar.

90-Zr

LANL

9-Be MT2, no covar.

46-Ti

238-Pu

241-Pu MF33 MT18

241-Am

LLNL

no covar.

78-Kr

123-Xe

124-Xe

185-Re

187-Re

239-U

LANL

R-matrix

4-He

6-Li

16-O

New evaluations (cont.)

LANL/ORNL

47-Ti

49-Ti

50-Ti

58-Ni MF2, a-prod.

235-U MF31,33

238-U MF31,33

239-Pu MF31,33

240-Pu

ORNL

19-F MF2/32

35-Cl MF2/32 RM Ltd

37-Cl MF2/32

39-K MF2/32

41-K MF2/32

52-Cr MF2/32 fast FZK MF33

53-Cr MF2/32

60-Ni MF2

IAEA/ ORNL

55-Mn

180-W

182-W

183-W

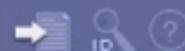
184-W

186-W

Narrowly missed VII.1beta0

	Commit #	Author	Comment
180-Ta	135	N.Summer	New LLNL evaluation
181-Ta	135	N.Summer	New LLNL evaluation
66-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
67-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
65-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
68-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
70-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
64-Zn	134	N.Summer	Replaced Zn-0 elemental with JENDL-4
58-Ni	133	S.Holloway	Corrected MT=3 MF=22
54-Cr	132	D.Wiarda	New ORNL/FZK evaluation
52-Cr	131	D.Wiarda	Correction to cross-reaction covariances

ENDF/B under GForge

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ENDF/B-VII

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Summary

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ENDF/B-VII

US Library of Evaluated Nuclear Reaction Data

[ENDF/B-VII.1beta0](#) | [ENDF/B-VII.1beta0.tgz](#)[Neutron evaluations \(ex ENDF/A\)](#) | [Full library](#) | [CSEWG actions](#) | [Issues](#) | [Discussion list](#) | [Documents](#)

Recent News

ENDF/B-VII.1beta0 released

[Mike Herman](#)

2010-10-22

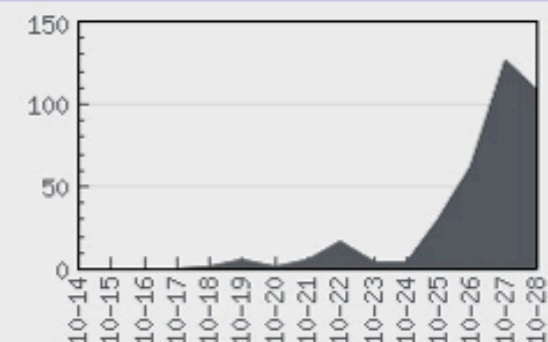
The beta0 version of the ENDF/B-VII.1 library (neutron sub-library only) has been released for testing on Oct. 22, 2010.

The library contains 411 files.

WARNING; beta0 is work in progress intended for the developers. It is neither guaranteed to be useful nor recommended for practical applications.

Time	Activity Type	By
2010-Oct-29		
13:23:02	Commit: Added LLNL evaluations for Ta-180 and Ta-181	Neil Summers
2010-Oct-28		
21:19:36	Tracker item "10B(n,g)11B : sharp drop-off in (n,g) cross section above 0.5 MeV" opened	Neil Summers
20:14:30	Tracker item "Zn-72,73: ACTION LLNL, finalize the evaluations" changed status to Closed	Neil Summers
20:12:29	Commit: Replaced Zn-0 elemental evaluation with JENDL-4 evaluations for Zn-64,65,66,67,68,70.	Neil Summers
2010-Oct-27		
18:19:03	Commit: Corrected MT=3 MF=22	Shannon Holloway
2010-Oct-25		
12:17:59	Commit: Cr54 is a completely new evaluations in collaboration with ORNL and FZK. High energy part and scattering matrices: Authors: P.Pereslvtsev, A. Konobeyev, L.Leal, U. Fischer This evaluated data file is based on the nuclear model code Talys 1.0 and on e...	Dorothea Wiarda
11:37:23	Commit: The cross reaction matrices in File 33 were given in subsections that explicitly gave the material and the reaction. However, the ENDF-102 manual states that a value of MMAT1=0 shall be used to mean MAT1=MAT in the CONT record which begins the subsect...	Dorothea Wiarda
2010-Oct-22		

Activity

[Request to join project](#)

Description

ENDF is the collaboration environment for the CSEWG members who are involved in the development of the Evaluated Nuclear Data File ENDF/B.

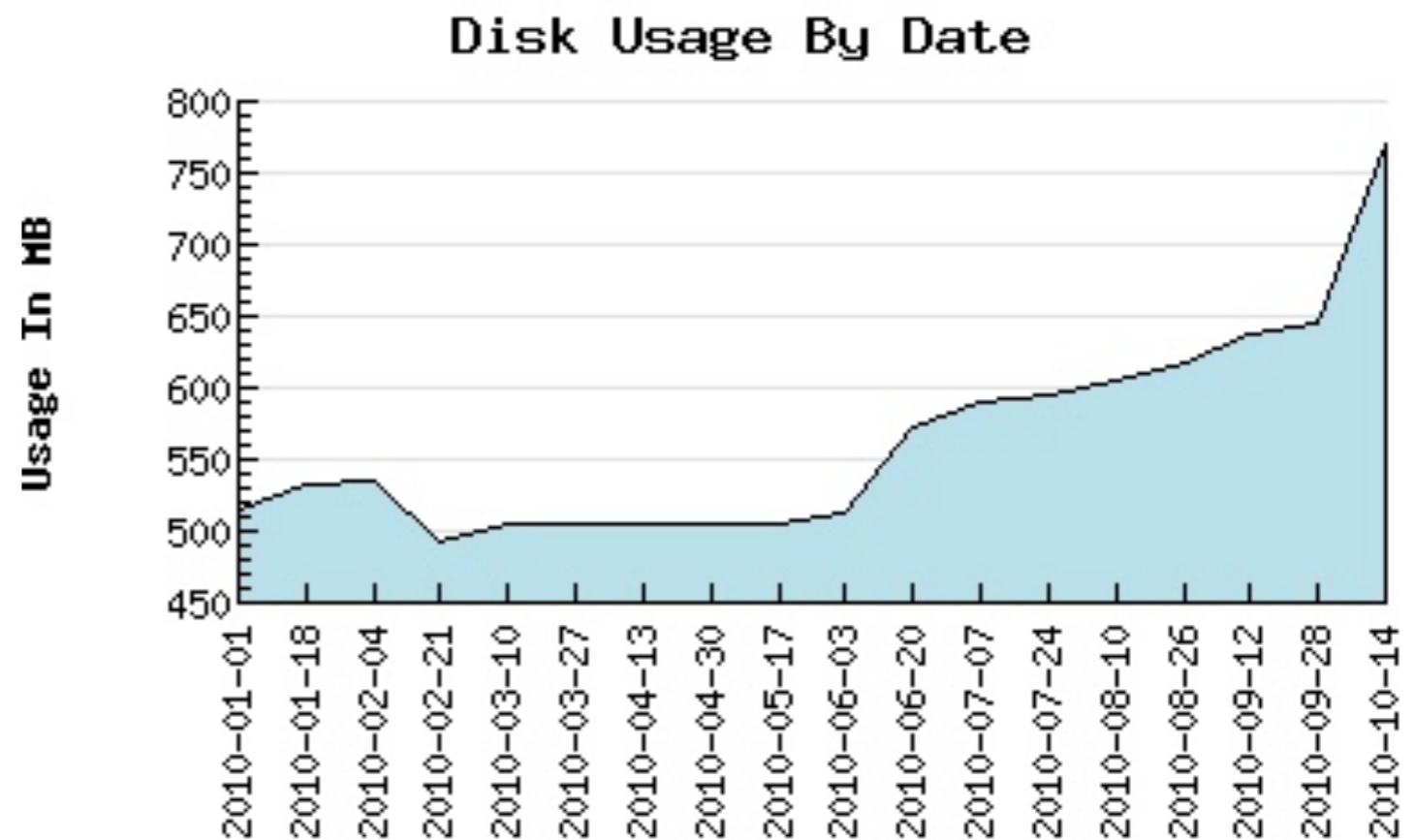
Developer Info

[Caleb Mattoon](#)
[Mike Herman](#)
[Ramon Arcilla](#)
[Michael Dunn](#)
[Marco Plgnl](#)
[Skip Kahler](#)
[Toshihiko Kawano](#)
[Dorothea Wiarda](#)
[David Brown](#)
[Neil Summers](#)
[Andrej Trkov](#)
[Roberto Capote](#)
[Young-Sik Cho](#)
[Boris Pritychenko](#)
[Patrick Talou](#)
[Pavel Oblozinsky](#)
[Mark Chadwick](#)
[Brett Carlson](#)
[Luz Leal](#)
[Samuel Hoblit](#)
[Donald Smith](#)
[Yaron Danon](#)
[Said Muqhabqhab](#)
[Richard McKnight](#)
[Morqan White](#)
[Shannon Holloway](#)
[Allan Carlson](#)
[Patrick Griffin](#)
[Robert Halght](#)
[Dennis McNabb](#)

ENDF/B under GForge

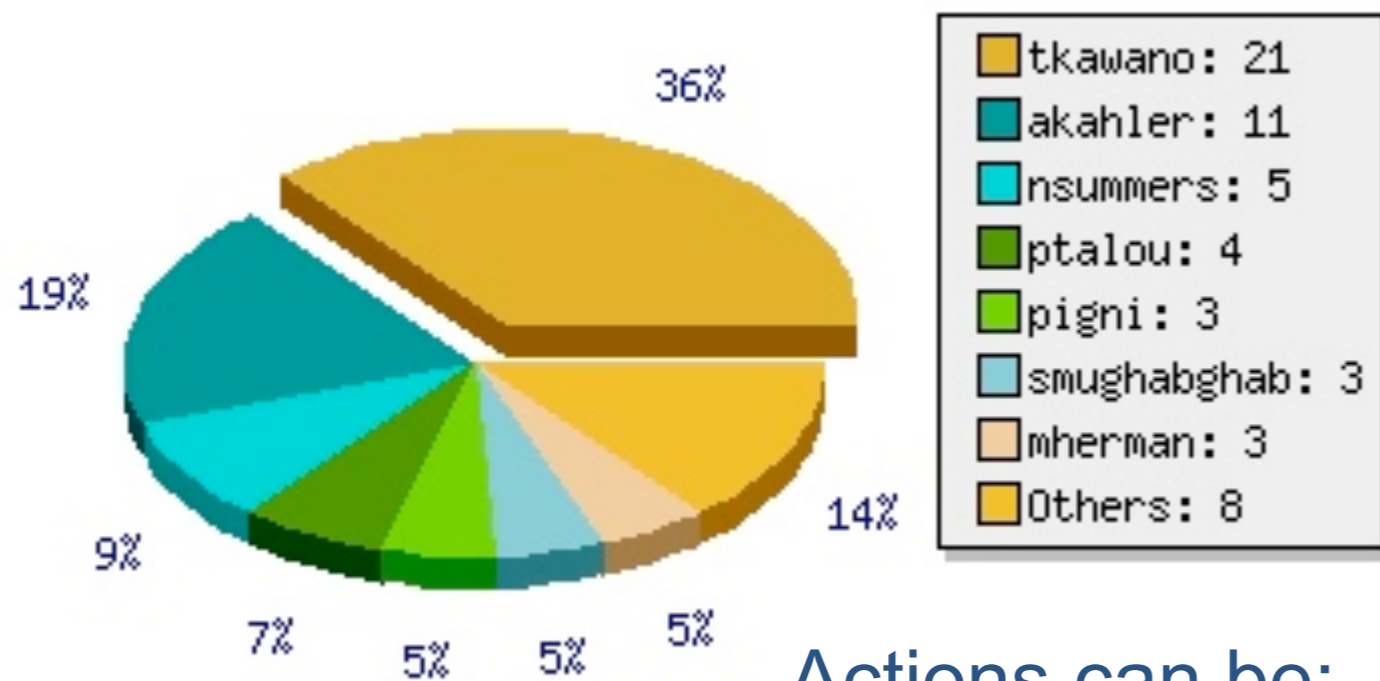
(Don Smith: Nuclear Data Facebook)

- Version control: Subversion
- Deficiency tracking
- To do list tracking
- Release system
 - Tags & Files
- Documents
- Mailing list
- (Forum)
- (Wiki)



Open CSEWG actions

Tracker Items By Assignee

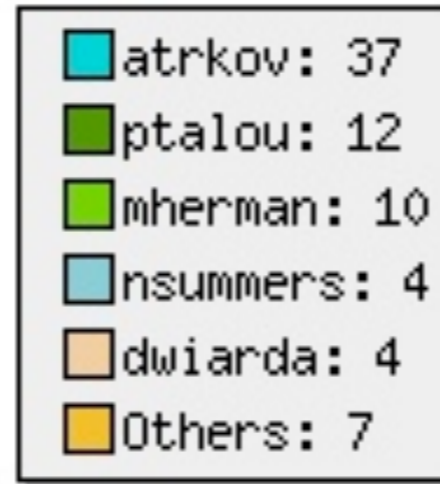
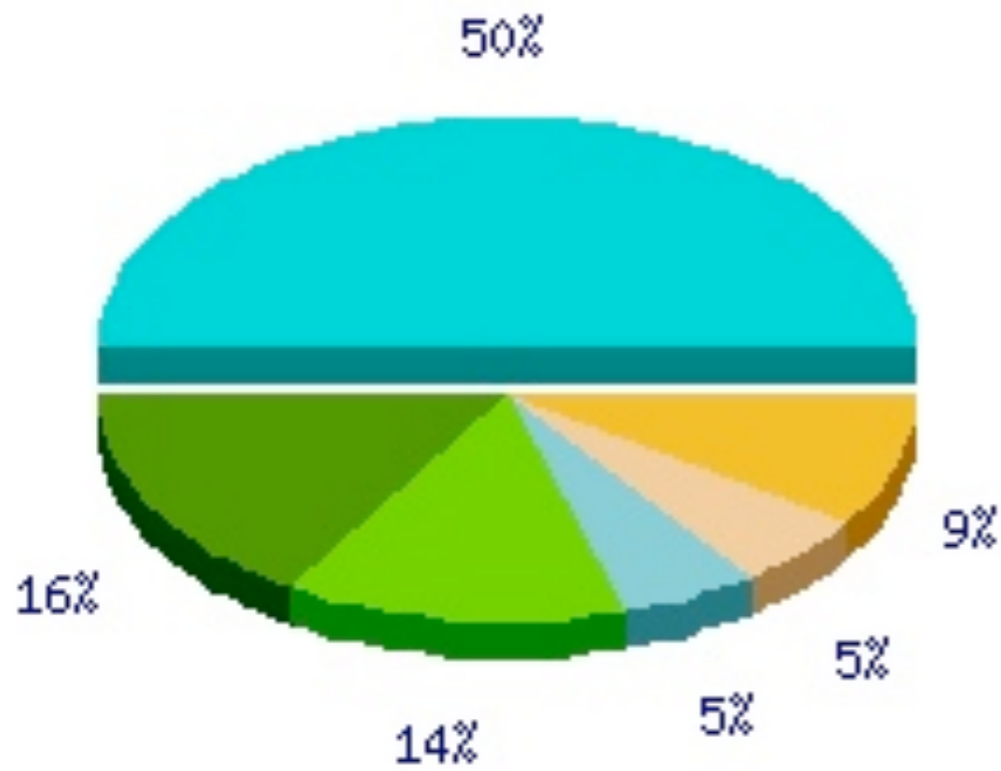


Actions can be:

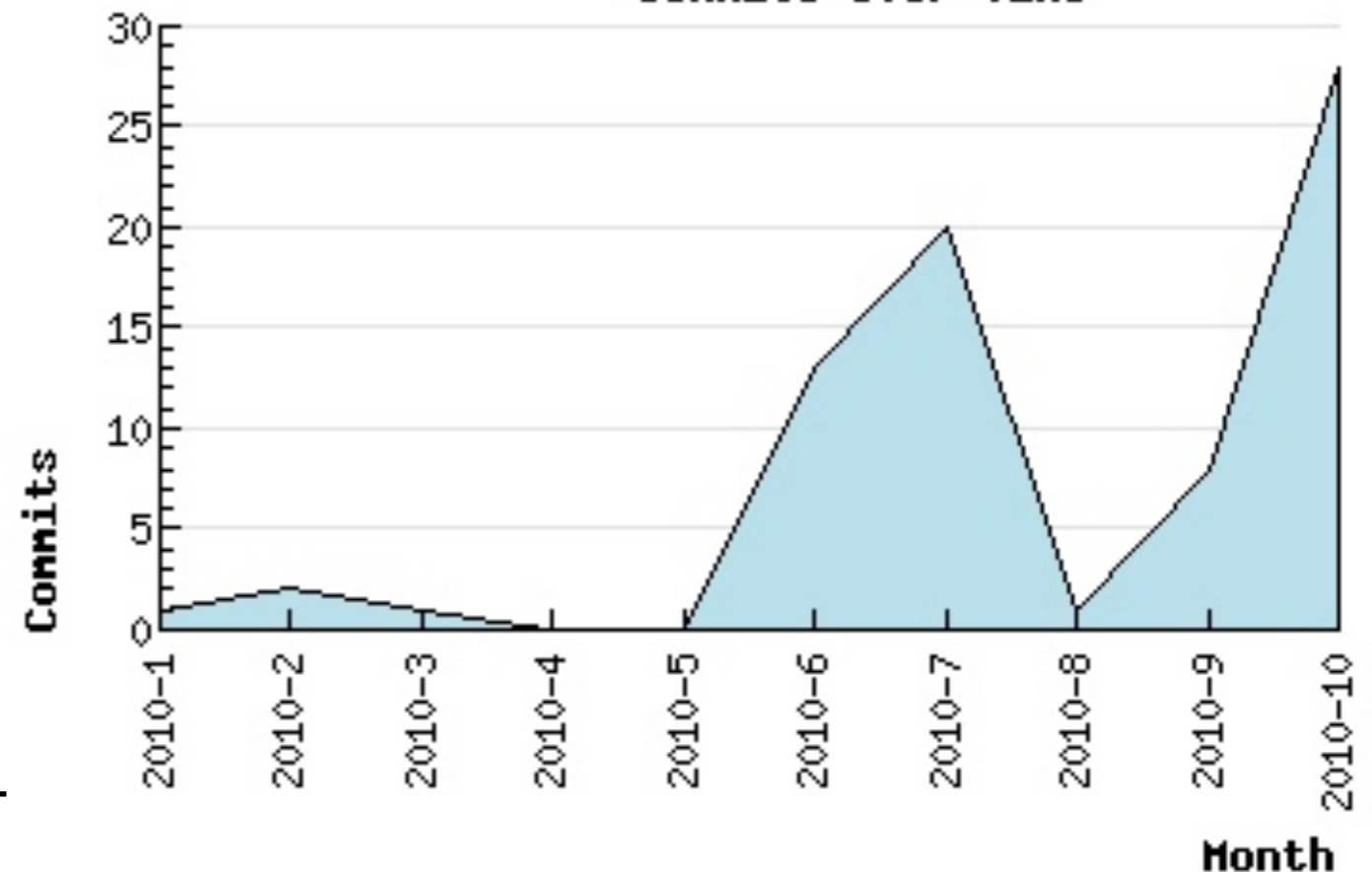
- opened
- assigned and re-assigned
- scheduled and re-scheduled (nagging e-mails)
- modified
- associated with commits
- documented
- closed

Commits by user

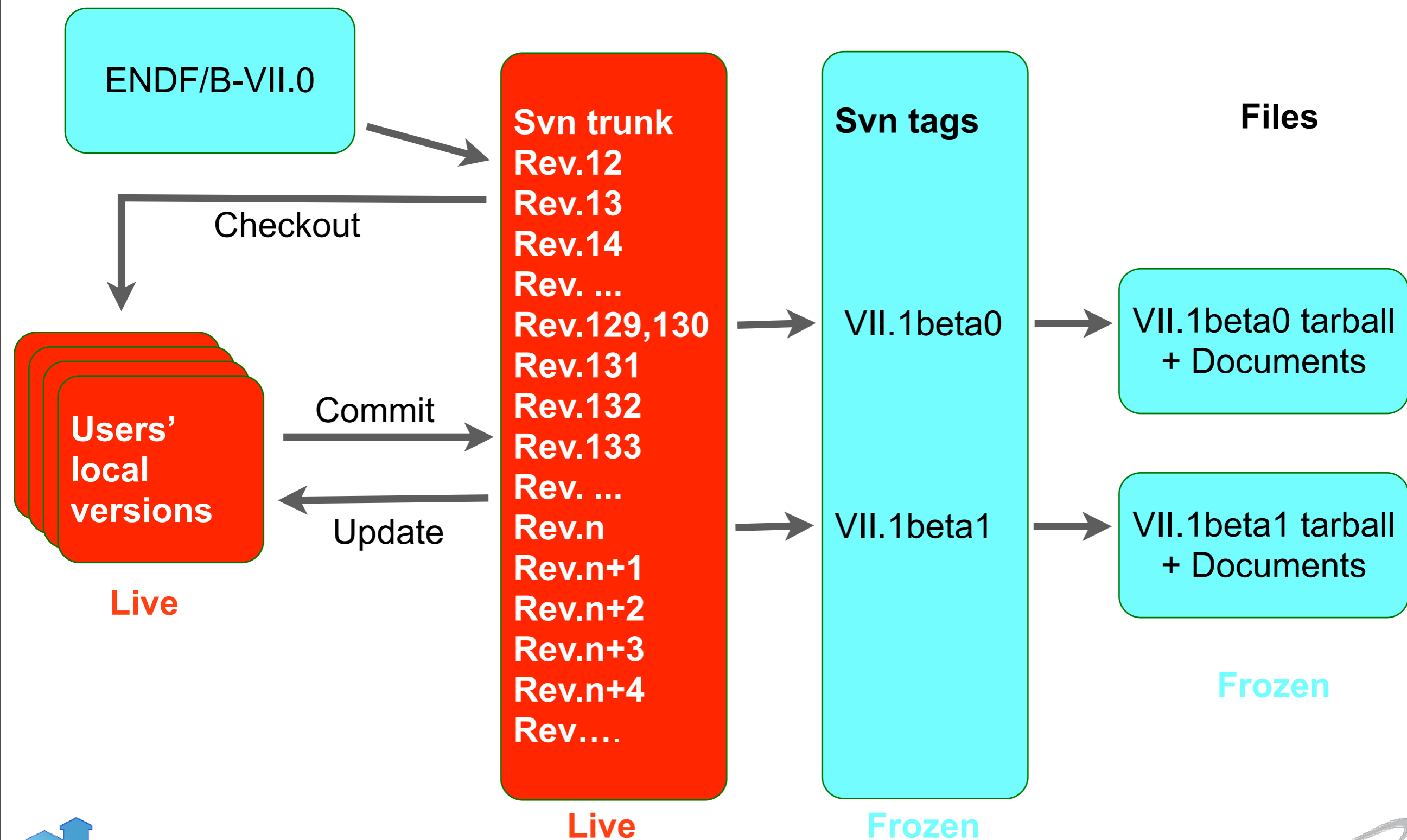
Commits by User



Commits Over Time

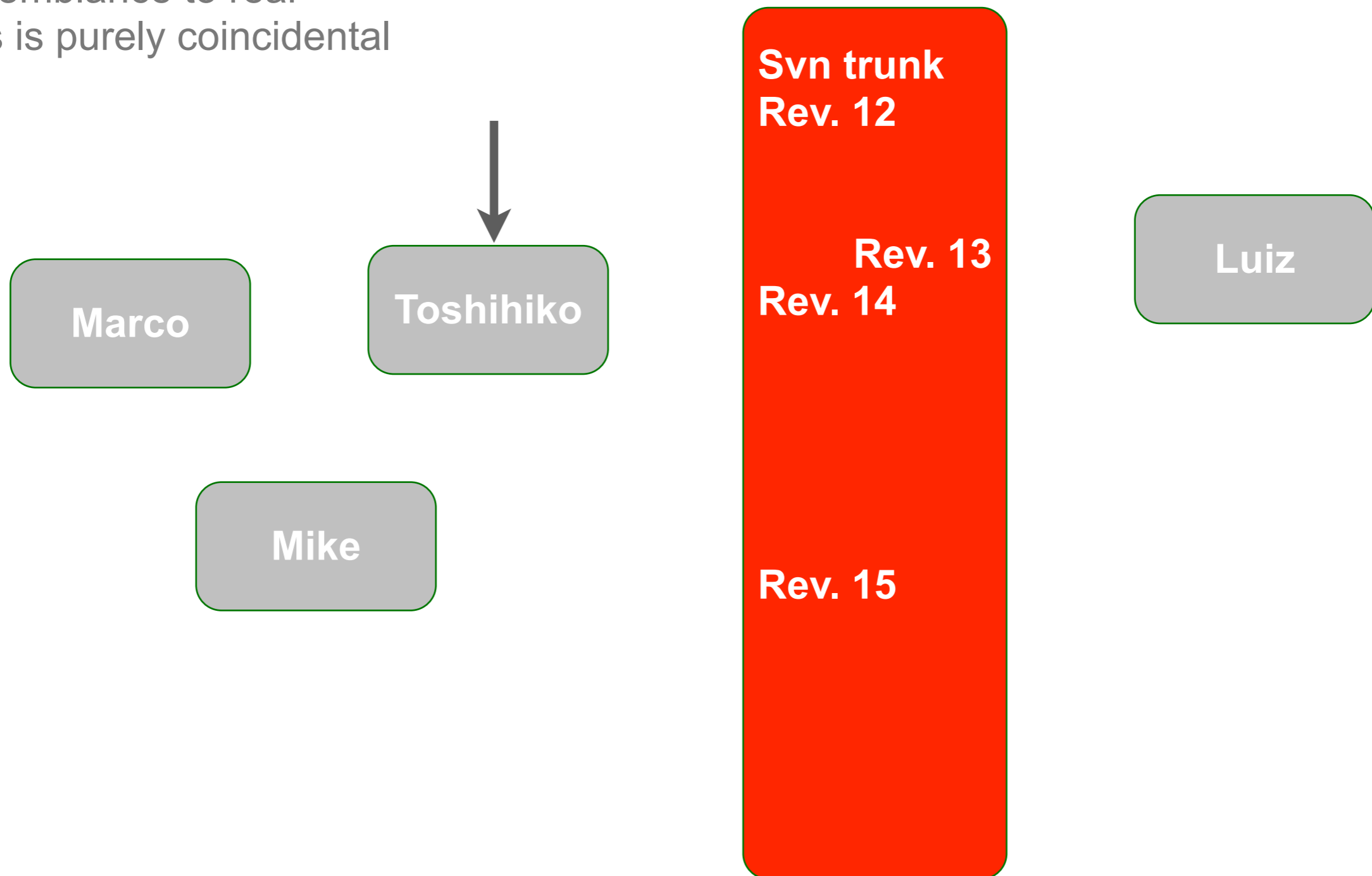


Release in GForge



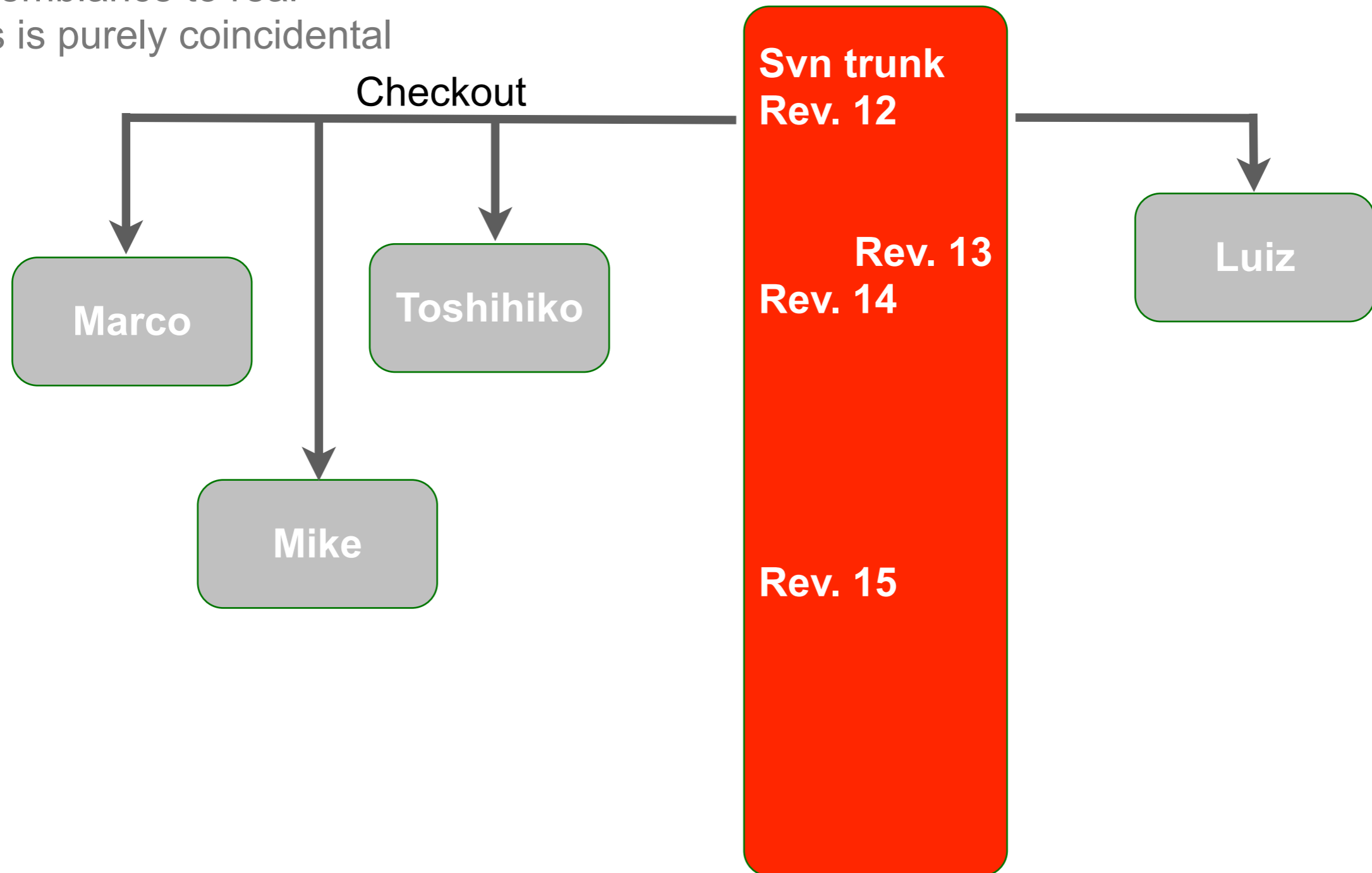
Subversion merges changes but it can be fooled!

Any resemblance to real
persons is purely coincidental



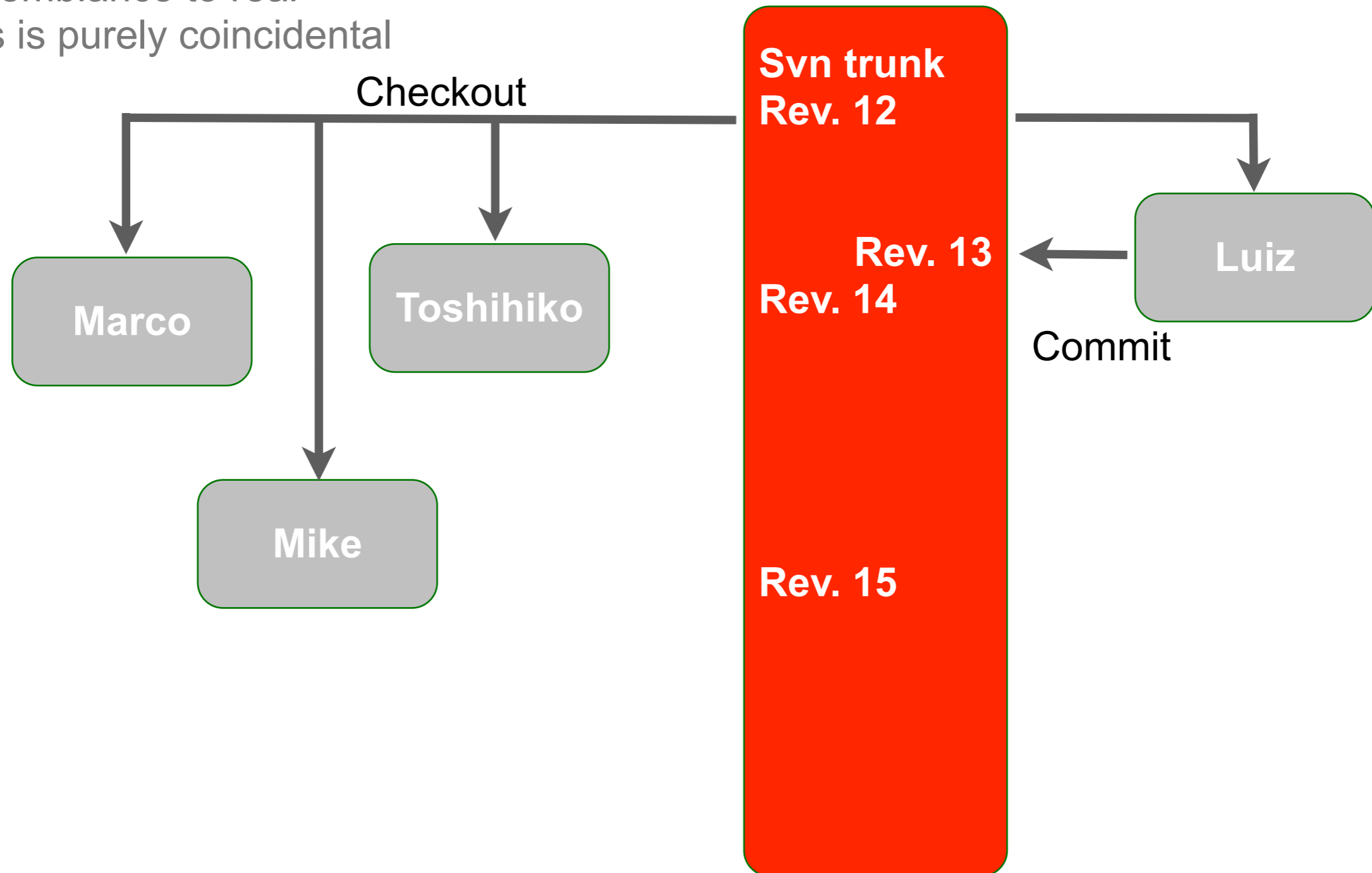
Subversion merges changes but it can be fooled!

Any resemblance to real persons is purely coincidental



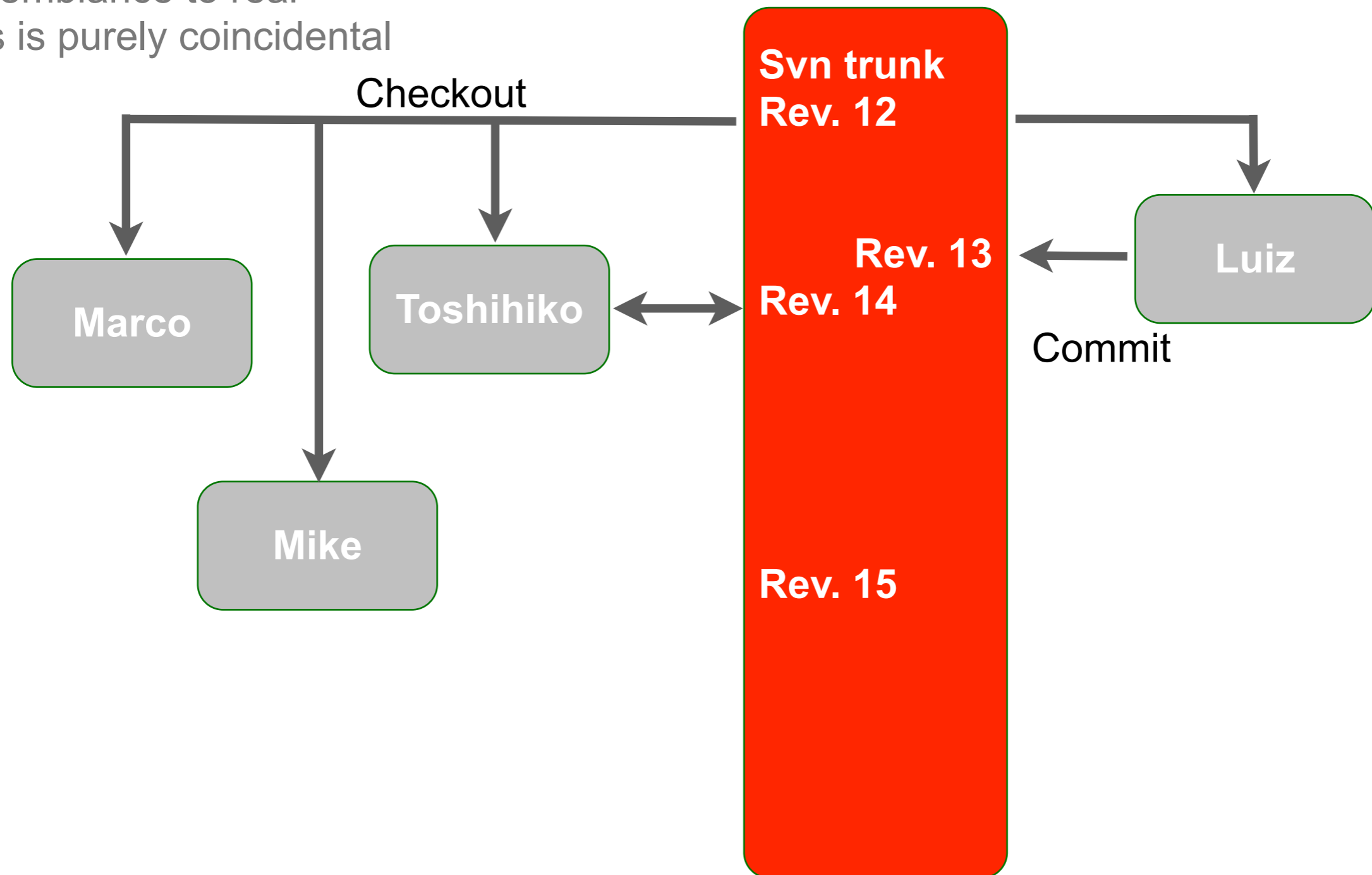
Subversion merges changes but it can be fooled!

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persons is purely coincidental



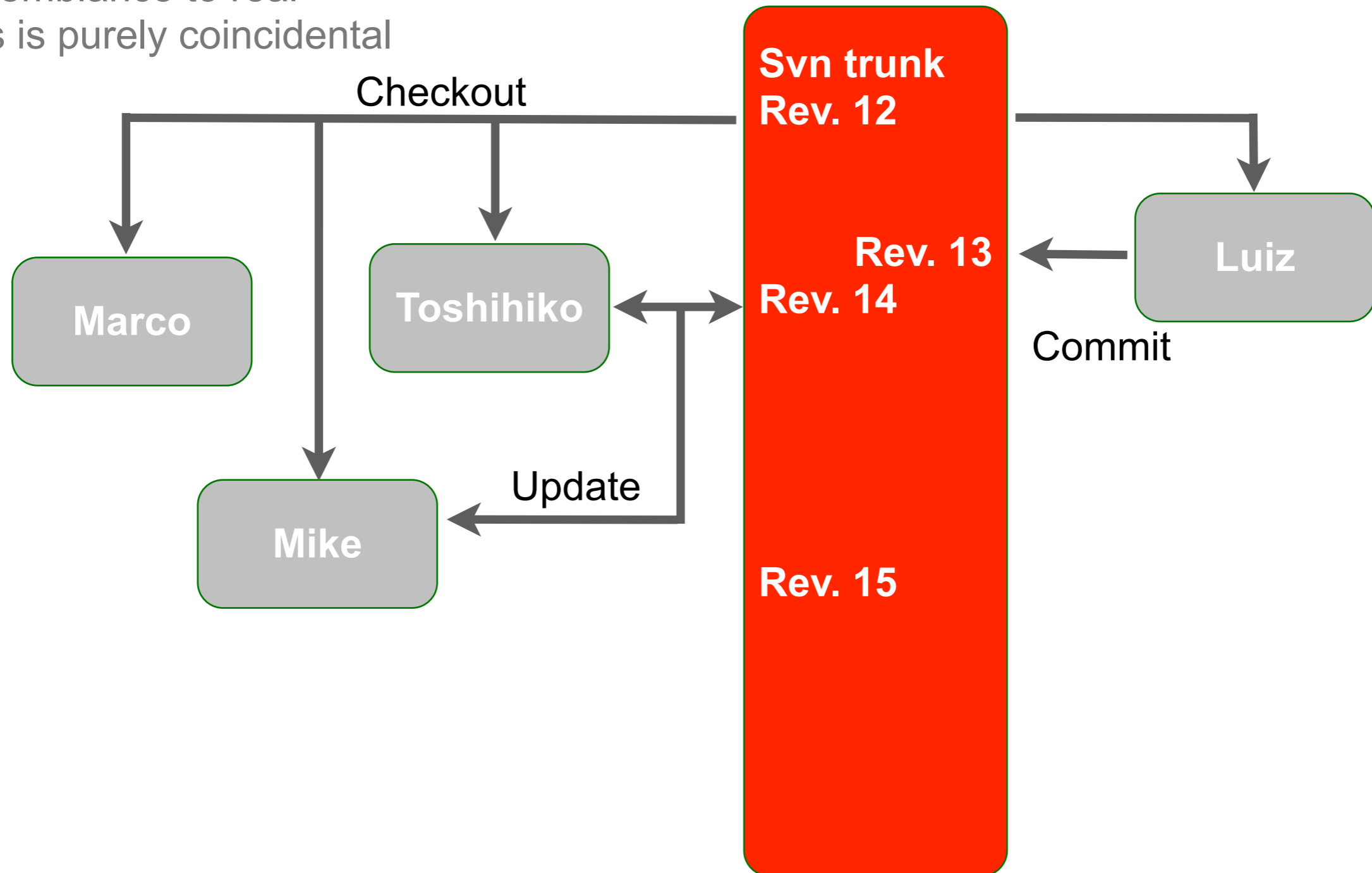
Subversion merges changes but it can be fooled!

Any resemblance to real persons is purely coincidental



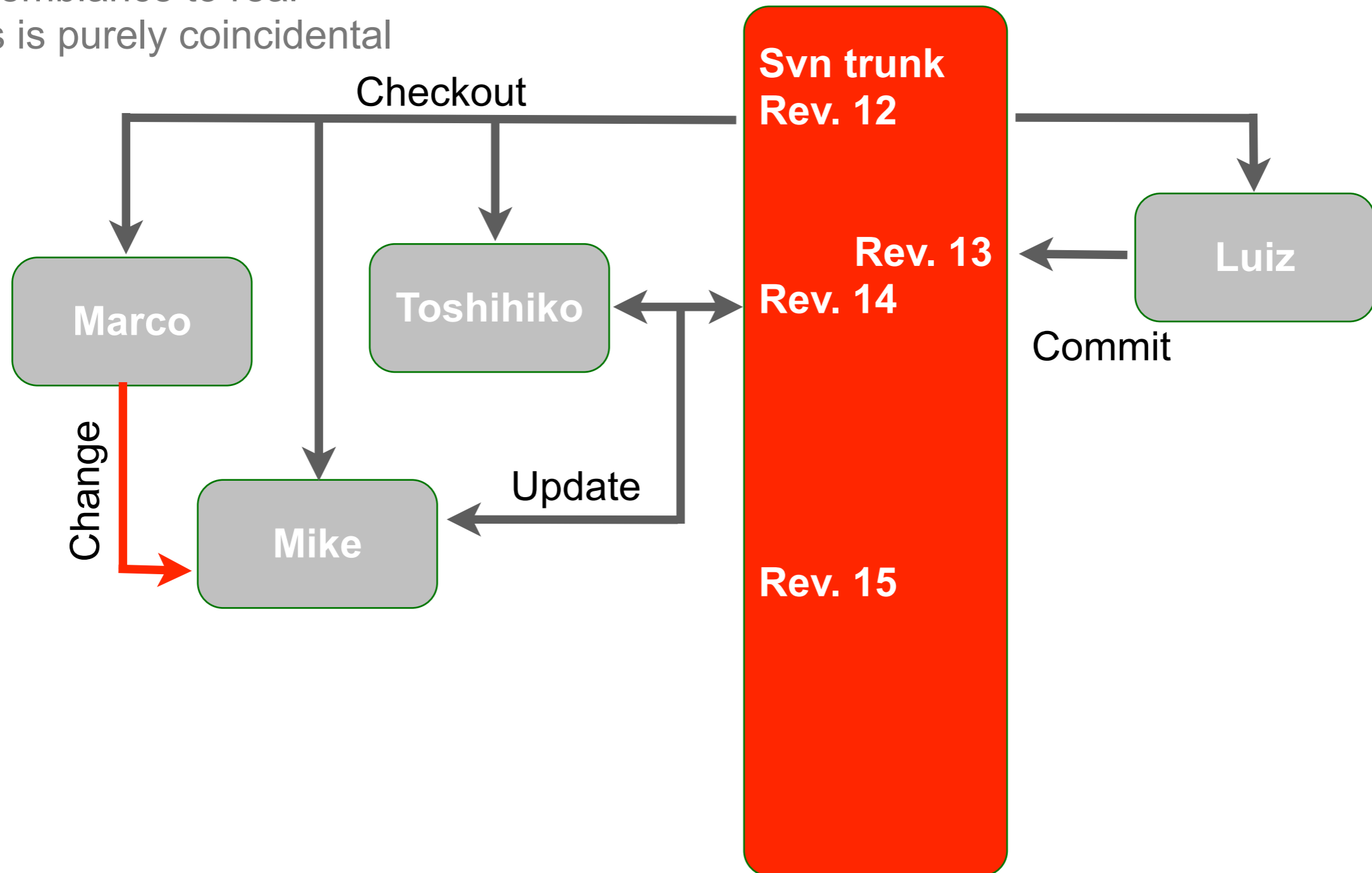
Subversion merges changes but it can be fooled!

Any resemblance to real persons is purely coincidental



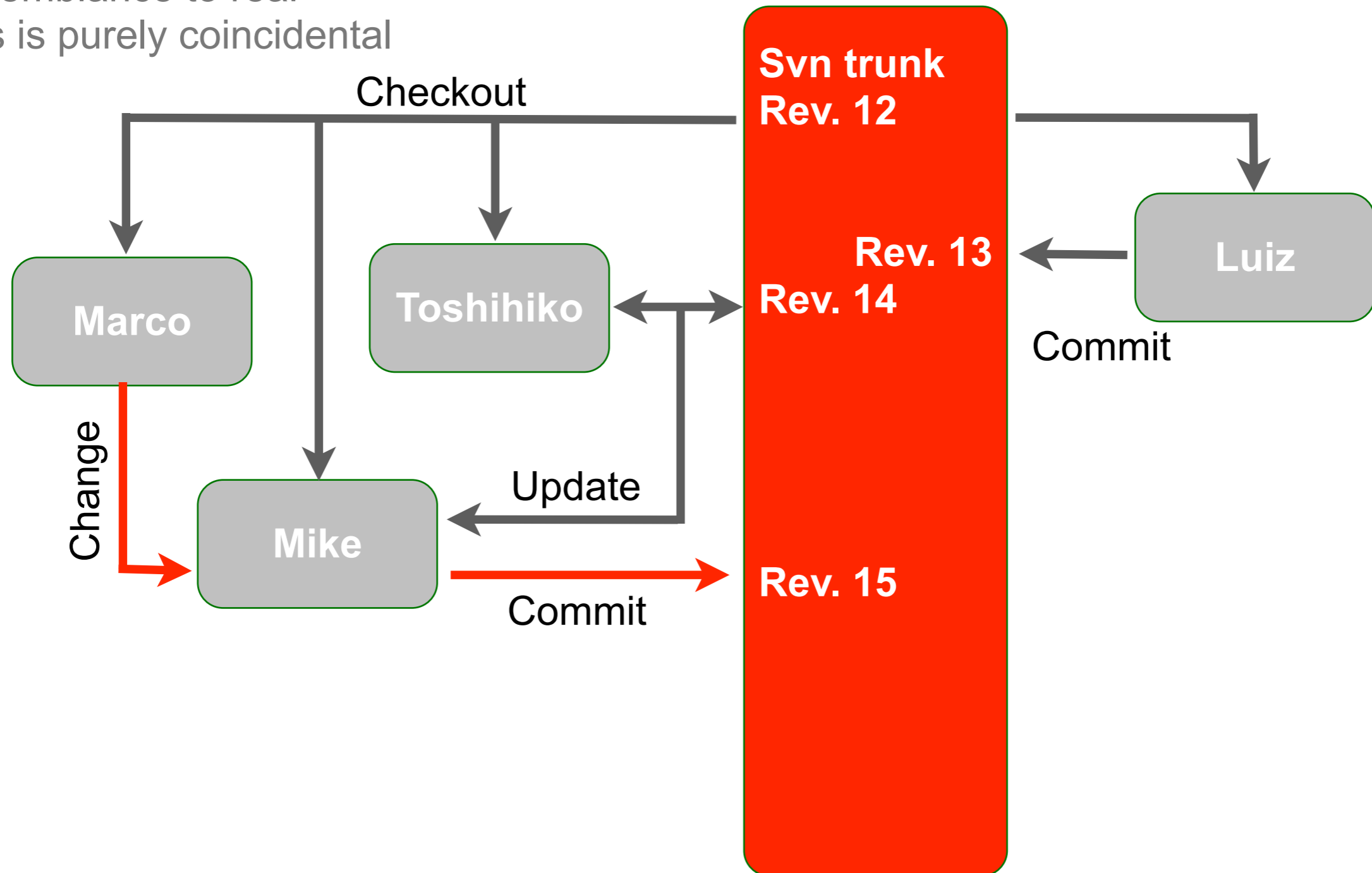
Subversion merges changes but it can be fooled!

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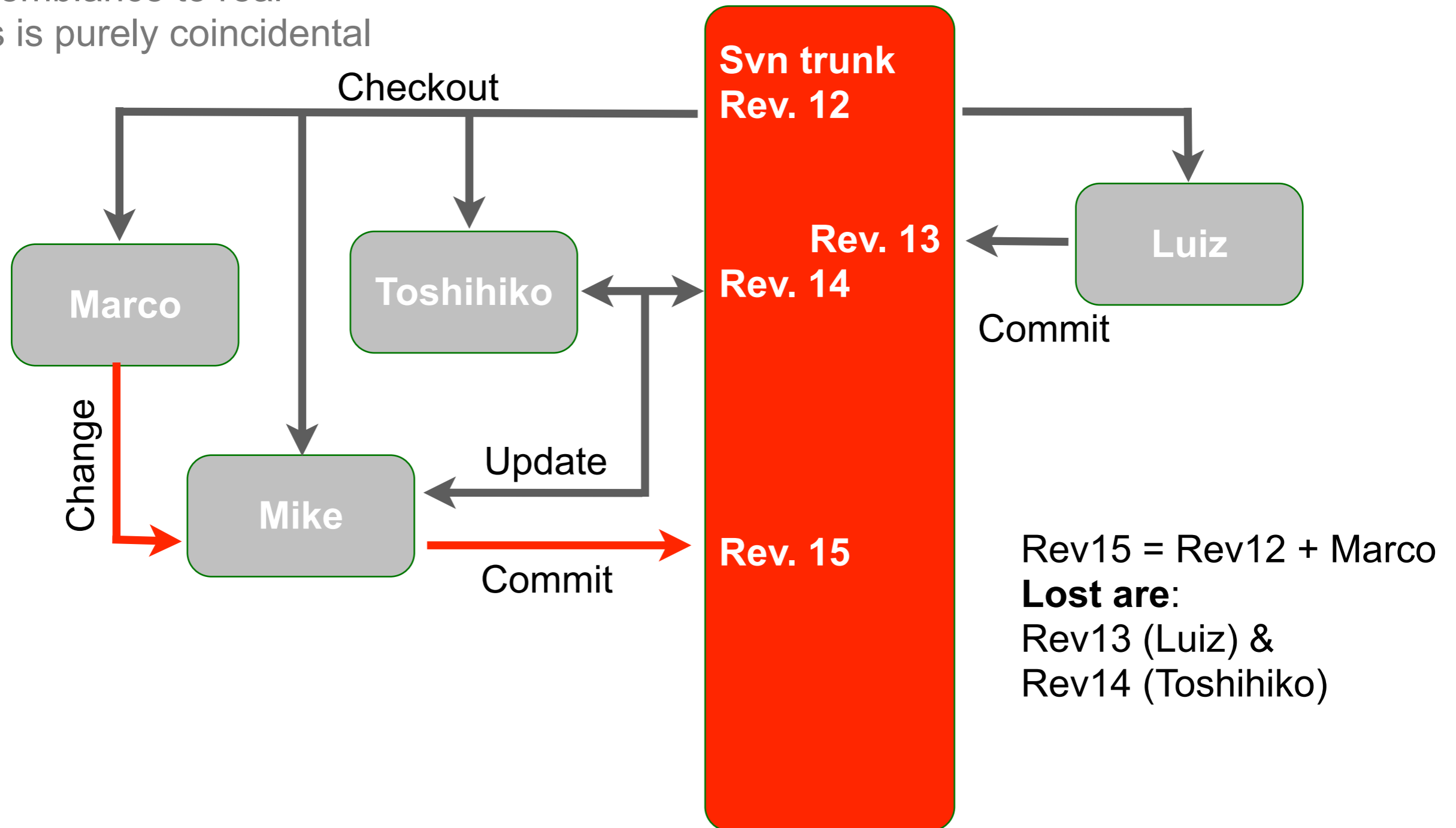
Subversion merges changes but it can be fooled!

Any resemblance to real persons is purely coincidental



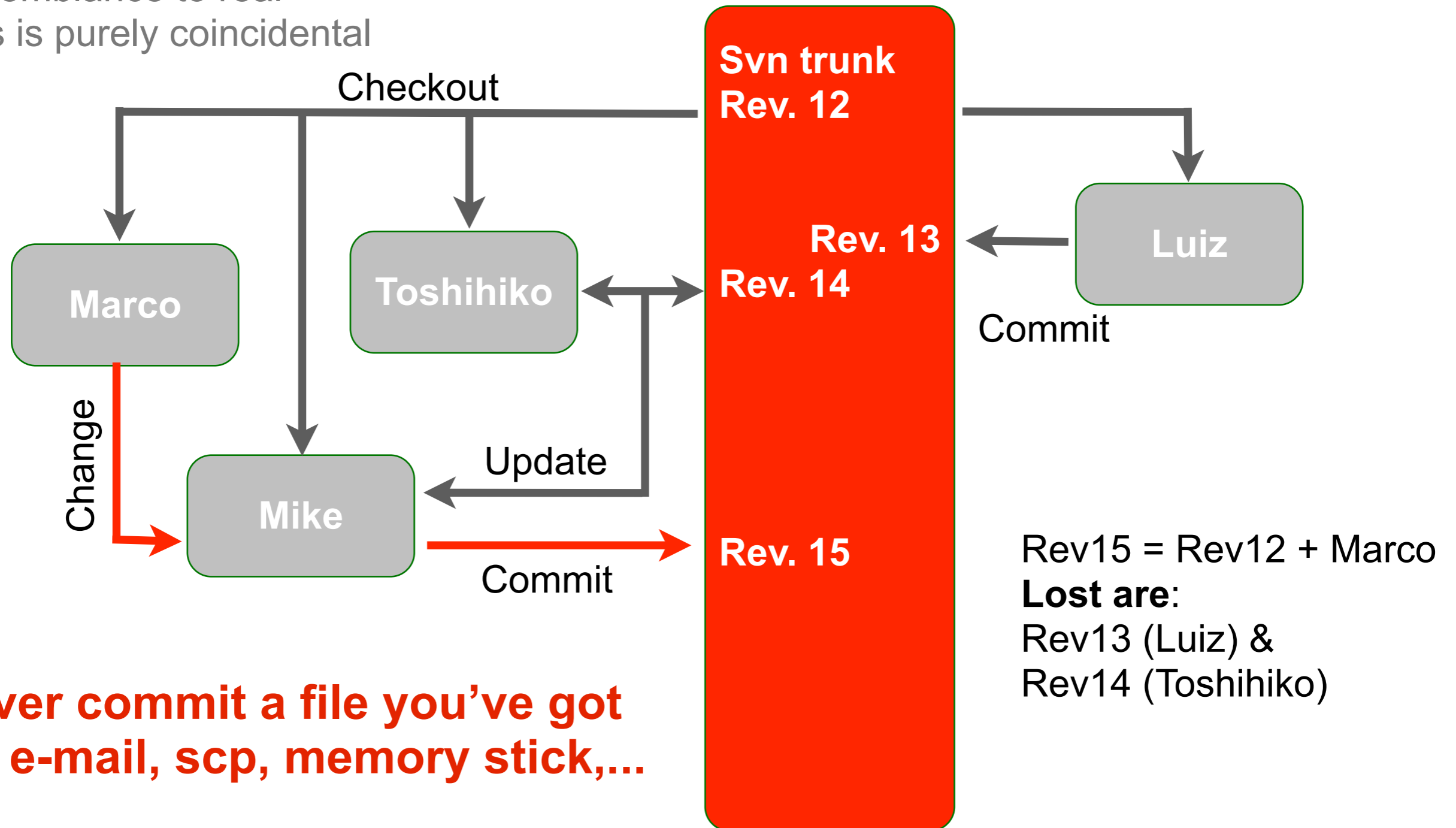
Subversion merges changes but it can be fooled!

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Subversion merges changes but it can be fooled!

Any resemblance to real persons is purely coincidental



Never commit a file you've got via e-mail, scp, memory stick,...

Commit suggestions

- Commit one issue at a time (to commit whole Actinoid file in one commit is fine, to commit two different new evaluations is NOT!)
- Keep in mind that commits might be (and occasionally are!) reverted
- Write the ‘commit comment’ in a way that others can understand what was done
- If appropriate, associate commit with the tracker, e.g., ‘**[#236]** Corrected wrong flag in MF ...’
- Load documentation (reports, plots, outputs) to Docs

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My Queue

My Queue Pending

Id	Summary	Priority	
302	Zr-all isotopes: ACTION Provide new set of evaluations	3	remove
264	Cd-113: ACTION BNL implement recent Geel resonances when available	3	remove

Save Queue

Assigned Tracker Items Submitted Tracker Items Projects

Project	Tracker	Id	Priority	Summary
ENDF/B-VII	Deficiencies in VII neutrons	332	2	3H, checkr issues
ENDF/B-VII	Deficiencies in VII neutrons	334	2	7Be, checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	340	2	19F, checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	348	2	39K, chekr issue
ENDF/B-VII	Deficiencies in VII neutrons	350	2	41K checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	354	2	46Ti checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	355	2	47Ti checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	356	2	49Ti checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	357	2	50Ti checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	360	2	52Cr checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	362	2	53Cr checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	364	2	55Mn checkr issues
ENDF/B-VII	Deficiencies in VII neutrons	372	2	58Ni checkr errors
ENDF/B-VII	Deficiencies in VII neutrons	399	2	123Xe checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	401	2	124Xe checkr issue
ENDF/B-VII	Deficiencies in VII neutrons	419	2	178Hf checkr issue

beta0 release notes

- There are 37 new (partially new files), mostly:
 - light nuclei
 - structural materials
 - actinides
- ~50% of the 125 new materials were adopted from JENDL (1 from JEFF-3.3). Actinoid => JENDL-4.0?
- Considerable effort directed to:
 - fission spectra
 - new resonance parameters
 - covariances
- BNL covariances were advanced through the AFCI project but have not yet been incorporated
- Systematic cleaning done by A.Trkov in June/July (however, new files - new problems)
- VII.1beta0 is not clean! (see Ramon's presentation)

Next steps

- Should we have a new version very shortly?
 - accommodate missed evaluations
 - fix trivial problems
 - address recommendations of this meeting
- Next major beta before mini-CSEWG in June (should include most of the covariances)
- Final beta version in October
- NDS publications - drafts needed in April
 - main paper
 - covariance papers