Git is What Gets You There

How Git Makes Upgrading Addon Mods Easier

Overview

What is Git?

- Distributed Versioning System
- Allows VARs to maintain their own changes
- Allows VARs to update their archive from BASIS' archive

Overview (Continued)

- BASIS decided to use Git for Addon Upgrades
- Git can resolve most differences between custom code and BASIS' code
- Example: First Real-World Project
  - 166 source files
  - 93 files changed
  - 77 changes resolved automatically
  - 16 files required human attention

The BASIS Git AddOn Archive

- Archive available to VARs; Email shaney@basis.com for details
- Archive of releases 8.20 through 12.00
- Updated with each release
- VAR downloads the archive from BASIS

Upgrade Process

- Roll archive back in time to customer version
- Apply Mods to archive
- Bring in the present (Current version of Addon)
- Resolve Conflicts
- Commit Resolutions for later use
- Archive has the merged version of Mods and Addon

Upgrade Process (Cont.)

- Roll Archive back in time
  - Every version of Addon is a checkin in the Git archive
  - Git allows users to roll archives back to any point in the archive's history
  - You would choose the version that your modifications were made to
- Apply Changes
  - Callpoints and source in your modifications are copied to their counterparts in the archive
  - Your changes are committed into the archive as a new custom version

Upgrade Process (Cont.)

- Bring in the present
  - The latest version of Addon is pulled from BASIS' archive to yours
  - Changes brought in by this process are not committed to your archive right away
  - Most changes brought in by this process are resolved automatically by Git
  - Any changes that can't be resolved automatically are embedded inside the source file as a "conflict"
  - Having files containing conflicts divulged by Git is less tedious than creating diffs and patches

Upgrade Process (Cont.)

- Conflict Resolution
  - Most parts of the upgrade process are nearly automatic (commands typed at the command line)
  - Conflicts need to be manually resolved and then committed to the archive.
  - Conflicts happen when both Addon code and custom code have changed at the same place in the file

Upgrade Process (Cont.)

Conflict resolution format:

<<<<<<< HEAD

Your code

||||||| merged common ancestors

Code before your changes were applied

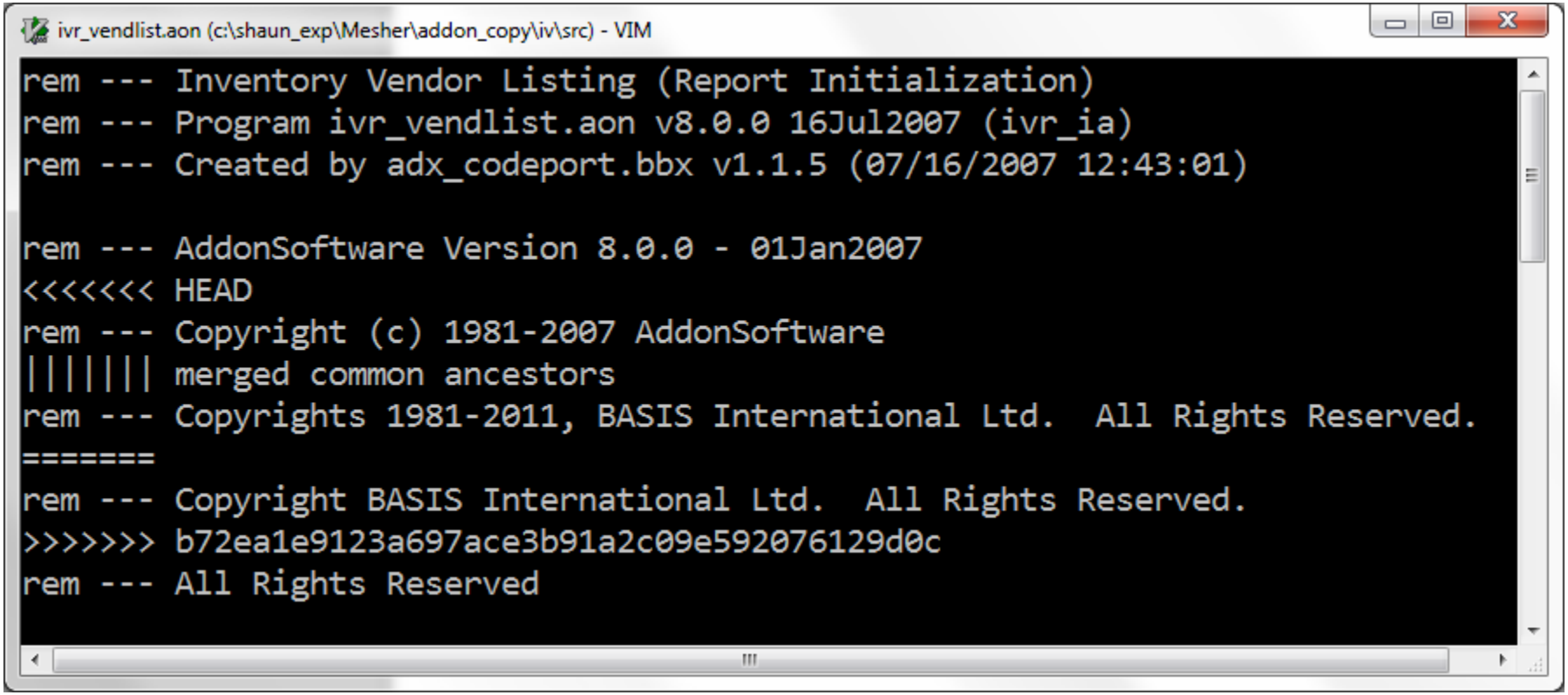
=======

Code from the latest version of Addon

>>>>>>> (commit id)

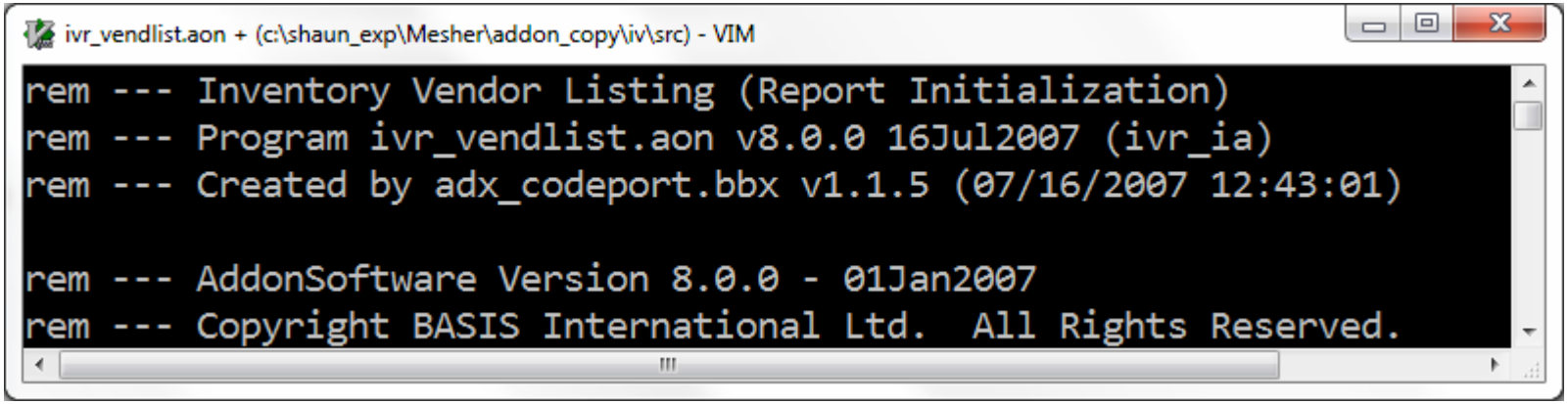
Upgrade Process (Cont.)

Conflict Example



Upgrade Process (Cont.)

This conflict would be resolved by keeping the BASIS Copyright notice from the latest version.

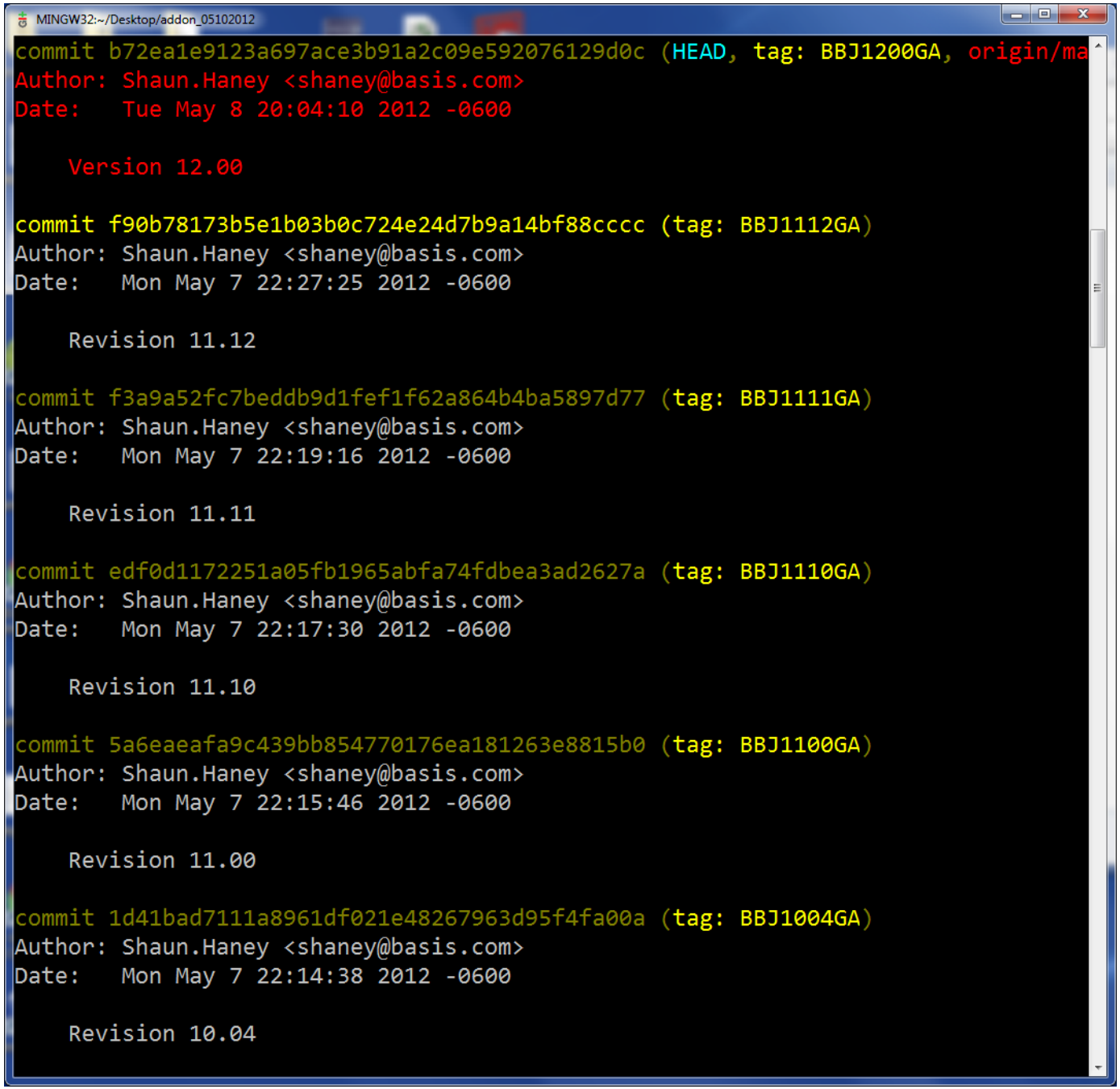


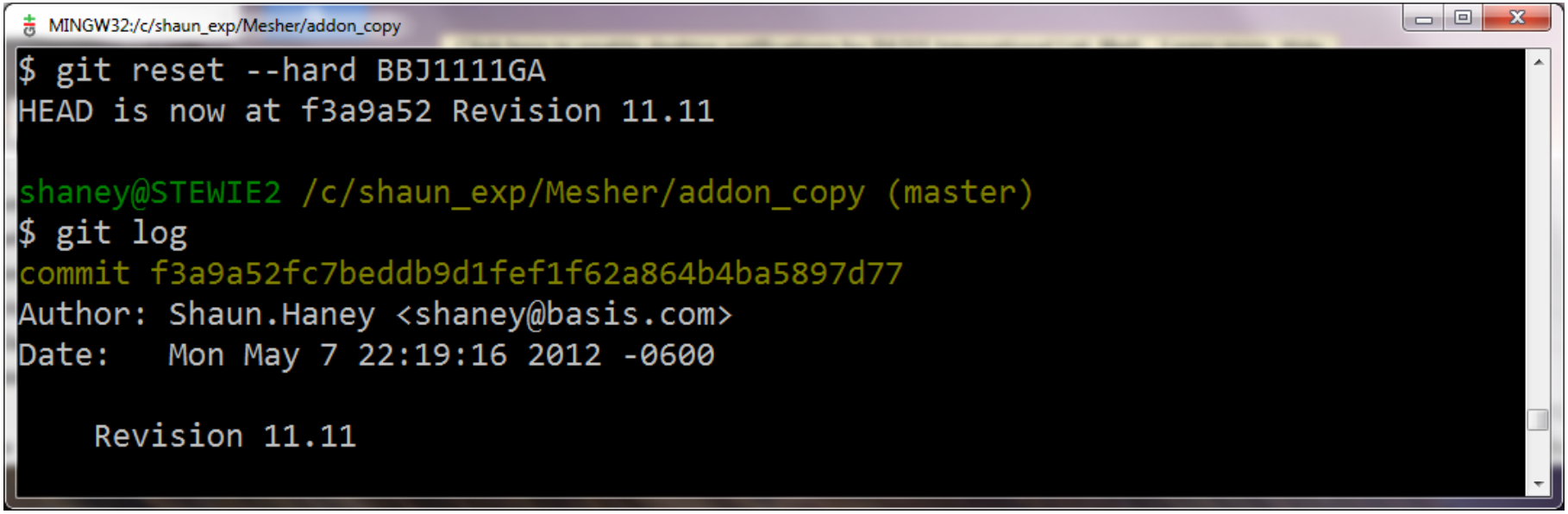
Upgrade Process (Cont.)

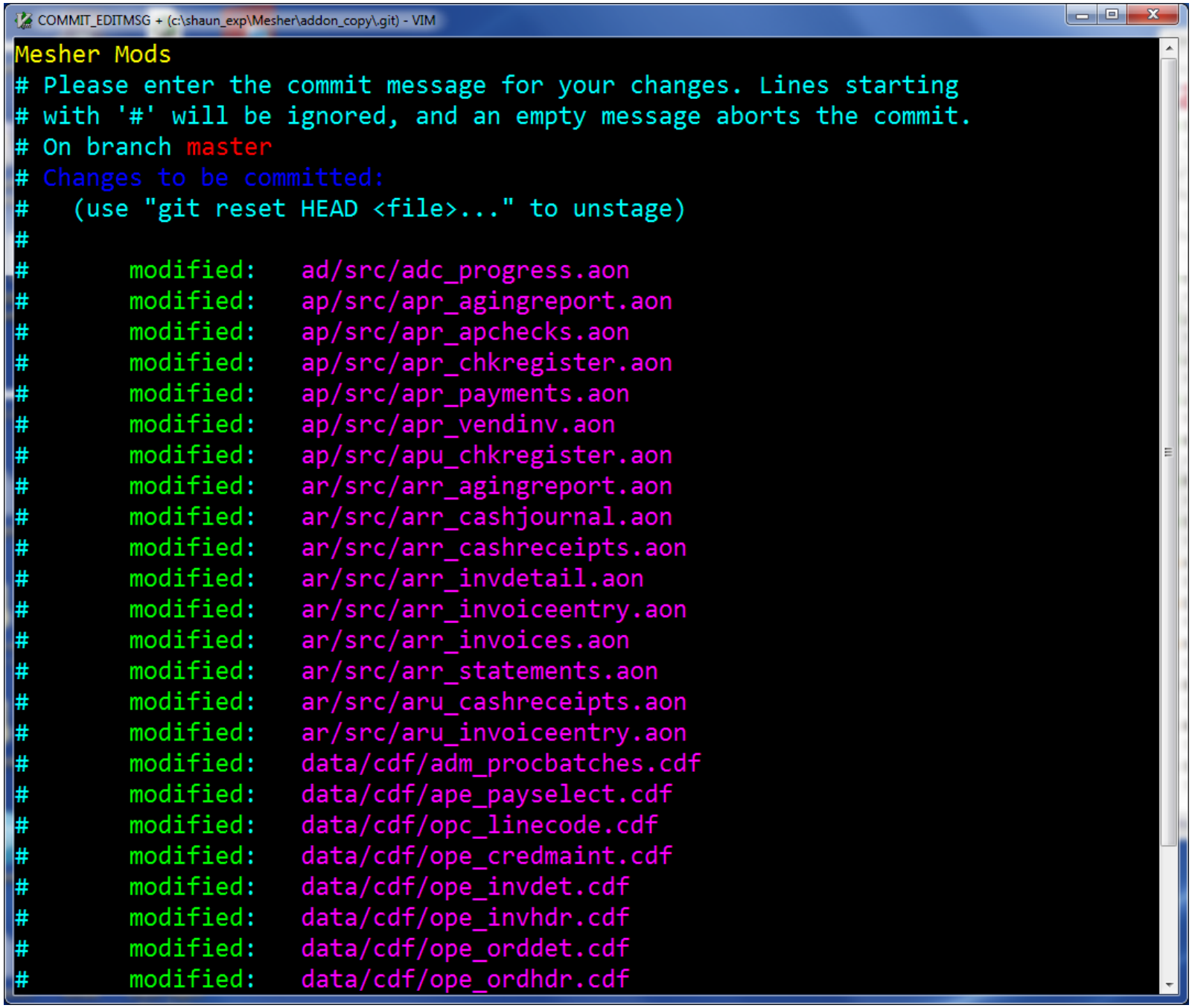
- Once conflicts are resolved and committed, source code is upgraded to the latest Addon
- Keep this valuable archive! Subsequent upgrades will get easier with fewer conflicts to resolve.
- Now, upgrading to the latest Addon does not have to be tedious or time-consuming

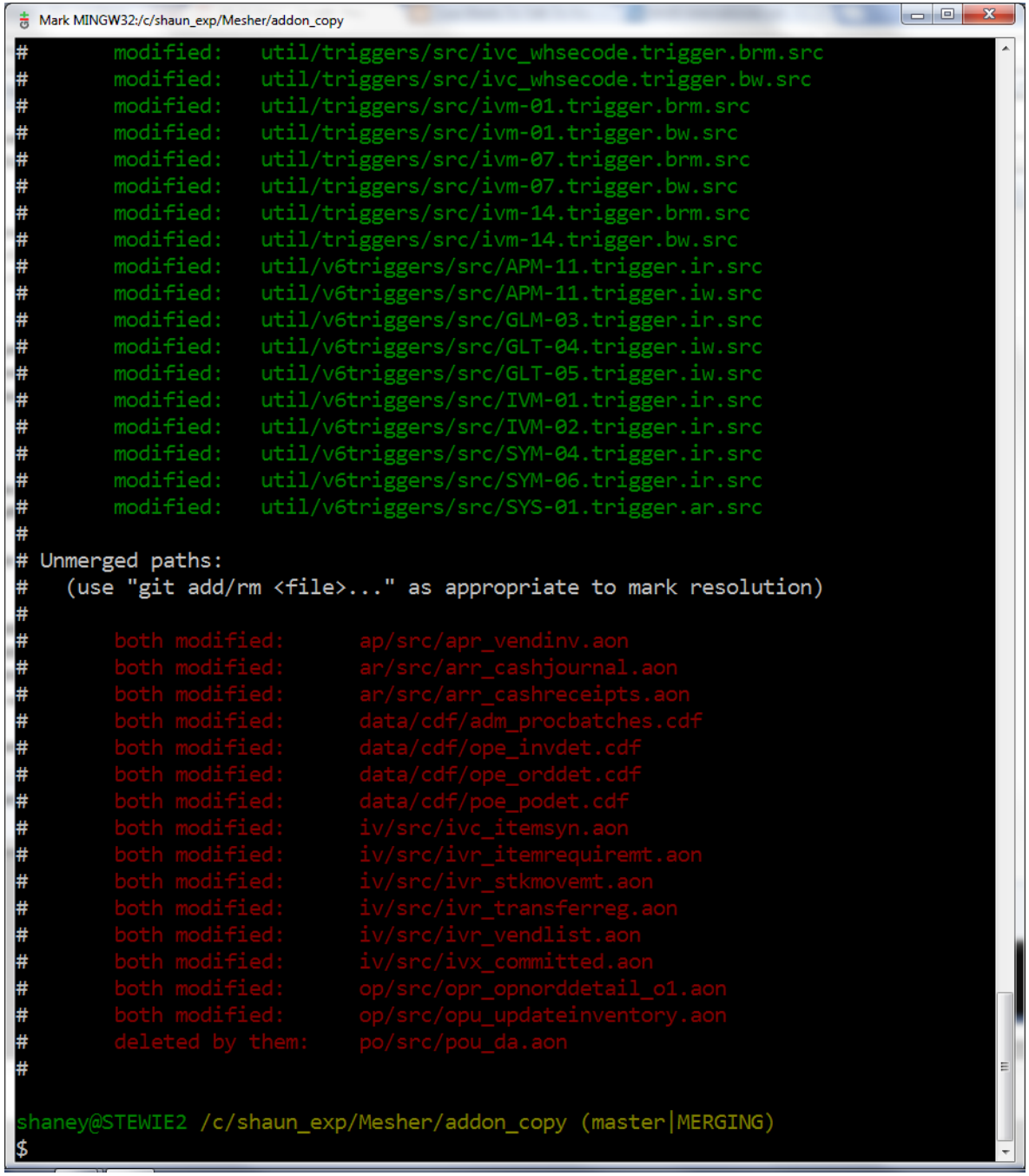
So Why Git to Upgrade Addon?

- The tedious process of locating what code needs to be changed is greatly reduced/ nearly eliminated
- Addon upgrades are less error prone
- Now, you can easily keep/maintain versions of your product
- Feel secure knowing you have the latest and greatest Addon


MINGW32:~/Desktop/addon_05102012
commit b72ea1e9123a697ace3b91a2c09e592076129d0c (HEAD, tag: BBJ1200GA, origin/ma
Author: Shaun.Haney <shaney@basis.com>
Date: Tue May 8 20:04:10 2012 -0600
Version 12.00
commit f90b78173b5e1b03b0c724e24d7b9a14bf88cccc (tag: BBJ1112GA)
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:27:25 2012 -0600
Revision 11.12
commit f3a9a52fc7beddb9d1fef1f62a864b4ba5897d77 (tag: BBJ1111GA)
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:19:16 2012 -0600
Revision 11.11
commit edf0d1172251a05fb1965abfa74fdbea3ad2627a (tag: BBJ1110GA)
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:17:30 2012 -0600
Revision 11.10
commit 5a6eaeafa9c439bb854770176ea181263e8815b0 (tag: BBJ1100GA)
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:15:46 2012 -0600
Revision 11.00
commit 1d41bad7111a8961df021e48267963d95f4fa00a (tag: BBJ1004GA)
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:14:38 2012 -0600
Revision 10.04


MINGW32:/c/shaun_exp/Mesher/addon_copy
$ git reset --hard BBJ1111GA
HEAD is now at f3a9a52 Revision 11.11
shaney@STEWIE2 /c/shaun_exp/Mesher/addon_copy (master)
$ git log
commit f3a9a52fc7beddb9d1fef1f62a864b4ba5897d77
Author: Shaun.Haney <shaney@basis.com>
Date: Mon May 7 22:19:16 2012 -0600
Revision 11.11


COMMIT_EDITMSG + (c:\shaun_exp\Mesher\addon_copy\.git) - VIM
Mesher Mods
Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
#
modified: ad/src/adc_progress.aon
modified: ap/src/apr_agingreport.aon
modified: ap/src/apr_apchecks.aon
modified: ap/src/apr_chkregister.aon
modified: ap/src/apr_payments.aon
modified: ap/src/apr_vendinv.aon
modified: ap/src/apu_chkregister.aon
modified: ar/src/arr_agingreport.aon
modified: ar/src/arr_cashjournal.aon
modified: ar/src/arr_cashreceipts.aon
modified: ar/src/arr_invdetail.aon
modified: ar/src/arr_invoiceentry.aon
modified: ar/src/arr_invoices.aon
modified: ar/src/arr_statements.aon
modified: ar/src/aru_cashreceipts.aon
modified: ar/src/aru_invoiceentry.aon
modified: data/cdf/adm_procbatches.cdf
modified: data/cdf/ape_payselect.cdf
modified: data/cdf/opc_linecode.cdf
modified: data/cdf/ope_credmaint.cdf
modified: data/cdf/ope_invdet.cdf
modified: data/cdf/ope_invhdr.cdf
modified: data/cdf/ope_orddet.cdf
modified: data/cdf/ope_ordhdr.cdf


Mark MINGW32:/c/shaun_exp/Mesher/addon_copy
#	modified:	util/triggers/src/ivc_whsecode.trigger.brm.src
#	modified:	util/triggers/src/ivc_whsecode.trigger.bw.src
#	modified:	util/triggers/src/ivm-01.trigger.brm.src
#	modified:	util/triggers/src/ivm-01.trigger.bw.src
#	modified:	util/triggers/src/ivm-07.trigger.brm.src
#	modified:	util/triggers/src/ivm-07.trigger.bw.src
#	modified:	util/triggers/src/ivm-14.trigger.brm.src
#	modified:	util/triggers/src/ivm-14.trigger.bw.src
#	modified:	util/v6triggers/src/APM-11.trigger.ir.src
#	modified:	util/v6triggers/src/APM-11.trigger.iw.src
#	modified:	util/v6triggers/src/GLM-03.trigger.ir.src
#	modified:	util/v6triggers/src/GLT-04.trigger.iw.src
#	modified:	util/v6triggers/src/GLT-05.trigger.iw.src
#	modified:	util/v6triggers/src/IVM-01.trigger.ir.src
#	modified:	util/v6triggers/src/IVM-02.trigger.ir.src
#	modified:	util/v6triggers/src/SYM-04.trigger.ir.src
#	modified:	util/v6triggers/src/SYM-06.trigger.ir.src
#	modified:	util/v6triggers/src/SYS-01.trigger.ar.src
#
Unmerged paths:
(use "git add/rm <file>..." as appropriate to mark resolution)
#
#	both modified:	ap/src/apr_vendinv.aon
#	both modified:	ar/src/arr_cashjournal.aon
#	both modified:	ar/src/arr_cashreceipts.aon
#	both modified:	data/cdf/adm_procbatches.cdf
#	both modified:	data/cdf/ope_invdet.cdf
#	both modified:	data/cdf/ope_orddet.cdf
#	both modified:	data/cdf/poe_podet.cdf
#	both modified:	iv/src/ivc_itemsyn.aon
#	both modified:	iv/src/ivr_itemrequiremt.aon
#	both modified:	iv/src/ivr_stkmovemt.aon
#	both modified:	iv/src/ivr_transferreg.aon
#	both modified:	iv/src/ivr_vendlist.aon
#	both modified:	iv/src/ivx_committed.aon
#	both modified:	op/src/opr_opnorddetail_o1.aon
#	both modified:	op/src/opu_updateinventory.aon
#	deleted by them:	po/src/pou_da.aon
#
shaney@STEWIE2 /c/shaun_exp/Mesher/addon_copy (master|MERGING)
$