

AIR T, INC.
IT Change Management
Procedures

I. Purpose:

The Change Management process is a structured process for documenting, gaining approval and demonstrating authority for change activities that have the potential to impact the internal production environment at AIR T, INC.

These Change Management Procedures provide a guide for change management activities and processes and help ensure quality and consistency of the production environment.

II. Scope:

This procedure document describes the approved change procedures as authorized by the Change Management and SDLC Policy.

III. References:

Change Management and SDLC Policy

IV. Activities not subject to Change Management

This section defines out-of-scope activities that are not subject to the Change Management Policy.

If a proposed change to production equipment has not been defined in this section, then that proposed change will require a Change Request for completion.

Furthermore, if any item defined below results in production downtime, further changes of the same type may be considered for elimination from this section.

Every year, or as-needed, this section should be reviewed and items added or removed as appropriate based on risk, problem rates or other factors.

A. Large Projects

Large projects may be excluded by management from this Change Management Procedure and be moved to the System Development Lifecycle (SDLC) process.

Management has sole discretion to move any item to the SDLC process based on any number of factors including, but not limited to risk, size, budget, effort and visibility.

In addition, management has the right to leave large initiatives in the Change Management process, or to de-escalate projects from the SDLC process of Change Management, based on reduced risk, etc.

B. Moves /Adds/Changes (MAC)

These are activities that have a low risk of affecting the production environment, and can be done as a standard course of daily business.

As defined, AIR T, INC. has determined that **MACs** are unlikely to affect more than a single user, such as moving a telephone from one desk to another, changing the configuration of a single network port, or adding a single HTML file to an active web server.

See Appendix A – Move/Add/Change (MAC) List. These are items that are not subject to the Change Management Policy and Procedures.

V. Change Management Procedures – Standard Changes

A. Change initiation and approval (see also Appendix D & E for platform specifics)

1. Changes are initiated by a requestor by sending (emailing / sending a form, etc.) request to IT.
2. IT will review the item for applicability to the Change Process (See “Activities Not Subject to Change Management”). If applicable, IT will document all application changes in the Project Tracking Database.
3. As necessary, IT will conduct research and verify the request.
4. IT will either respond to the requestor with information and close the request or will forward the request by email to the appropriate business unit owner for approval. **See Appendix B for a current list of business unit owners who can approve changes.**
5. If an appropriate approval is not received on the Change Request it cannot move forward and will be closed and the requestor will be notified.
6. Once approvals are received the Change Request is dispatched to the person responsible for making the change and the status is updated to “In Progress” within the Project Tracking Database.
7. The item will be researched for implementation requirements, etc. and scheduled to be installed/implemented.

B. Change Testing

1. The item will be assessed to determine if testing is required. **See Appendix C for when, and what type of testing is required.**
2. If required, a method will be determined on how to test the functionality, etc, including environment, test checklists, etc.
3. A representative of the business owner will test and the business application owner will sign off on completed test results before implementation begins.

C. Code Migration (Implementation)

1. Controls are in place to restrict migration of programs to production by authorized individuals only.
2. If applicable, the person responsible for implementing the change will take a pre-installation backup of the application or data, otherwise the prior day (full) backup will be utilized to potentially back-out the changes.
3. The change is implemented in production and notification of completion to the business owner will take place to initiate the post-implementation verification and approval.

D. Post-Implementation Review and Verification

1. After the required code, configuration, etc is installed or otherwise completed in production the business unit will perform a post-installation verification to determine whether or not the change was successful. If successful, the business unit owner, or designee will forward an email or other results to IT along with approval to close the change request. **See Appendix F**
2. IT will update the verification status, store the verification results and approval and close the Change Request.

3. If the post-installation verification fails, the business unit owner will notify IT and a determination will be made to either back out the change or to roll the change forward and initiate a subsequent change request to correct any deficiencies.

VI. Change Management Procedures - Emergency Changes

A. Emergency Changes - Definition

An item is identified as an emergency using the following criteria:

- Without corrective action, there will be permanent data loss or corruption, impacting the ability to report financial information.
- Without corrective action, there is revenue loss.
- The Director of IT has designated or escalated the item as an emergency.

If the situation qualifies as an emergency, then the following procedures are followed:

B. Emergency Change Procedures

Once the Emergency is confirmed:

1. Create a Change Request with the Change Type set to "Emergency".
2. The approval portions of the CR can be completed later, within 2 working days of the implementation.
3. The person responsible for implementing the change will take a pre-installation backup of the application or data, if applicable.
4. The change is implemented and notification of completion to the business owner will take place to initiate the Post-installation verification and approval.
5. Once in production the business unit will perform a post-installation verification to determine whether or not the change was successful. If successful, the business unit owner, or designee will forward an email or other results to IT along with approval to close the change request.
6. IT will update the verification status, store the verification results and approval and close the Change Request.
7. If the post-installation verification fails, the business unit owner will notify IT and a determination will be made to either back out the change or to roll the change forward and initiate a subsequent change request to correct any deficiencies.

Appendix A – Moves, Adds, and Changes List

Internal Applications:

- Minor Configuration Changes
- Data Changes, End User Query and Report Changes
- Mass Data Loads that do not affect Revenue

Database Administration List:

- Data insert/deletes to existing tables or columns, of less than 10K rows
- Creation or deletion of columns within existing tables
- Hot backups

Telecommunication Systems List:

- User Add/Change/Delete
- Scheduled reboots for maintenance
- Backups
- Log Archiving and Cleaning
- Telco Administrative Tasks (Adding, deleting, changing, resetting, T1 spans, Trunk groups, toll free, local , long distance numbers, trunks, DNIS, DID, routing, calling cards, and conference bridges)

Network List:

- IP Address Changes
- DMZ Changes
- Firewall configuration changes
- Data (Non-Critical) Restored from Network Backup Drives

Helpdesk List:

- Rebuild/Deploy workstation(s), or any change to a single user's workstation hardware
- Install application on workstation
- Restore file(s) from backup
- Scheduled reboots
- Disk, Storage Space Administration
- Password resetting and maintenance
- Anti-Virus Software/Server Maintenance
- User Moves (PC, Telephone, etc. to another cubicle)
- Standard Equipment Replacement (mouse, keyboard, monitor)

OS List:

- Printer/Printer Queue maintenance
- File system management
- Devices Add/Change/Delete
- DNS Add/Change/Delete

Network Security List:

Any protective measure needed to protect data or network security as determined by IT, including (but not limited to):

- Disabling user accounts
- Disabling computers
- Disabling network connections

Appendix B

Business Unit / Application Owners and Approvers

List of appropriate business owners / approvers:

Application	Business Information Owner / Approver	Application Type	Application Support
AS400	John Parry	General Ledger	In house IT
Microsoft Dynamics /GP	Michelle Girard	Payroll	Microsoft, and IBIS is the tech support
MAC2	Bill Simpson, Bob Wall, Chris Knollmeyer	Inventory / Work Management	In house IT
Fixed Assets Application FAS	John Parry	Fixed Assets	Sage
Symix	Kurt Hienrichs	Invoicing, Inventory, Work Management	Symix and 3rd party for Tech Support
It Infrastructure	Tammy Hawn	Network Management	In House IT

Appendix C

Testing Requirements and processes

This appendix describes the parameters that will be used to determine if testing will take place before implementation to production, or as part of the post-implementation process, or both.

1. All changes should be tested.
2. Testing should never be performed in the Production instance of a system
3. When possible, users should be involved in the testing and formally approve the changes made
4. Test scripts should be documented and included in the documentation for each change
5. Integration testing should also be considered to ensure that any changes made do not affect other automated processes
6. Documentation of the test should be retained by the IT department and traceable to the Change Management Database
7. In the event that data must be converted, conversion testing should be conducted between the origin and destination to confirm that all data converted is complete, accurate, and valid

APPENDIX D -

Source Code Management – AS400

Source Libraries – Active / Live

AIRTSRC	New Native 400 RPGLE source code
APLIBCSA	Accounts Payable - CSA
APLIBMAC	Accounts Payable – MAC
APLIBMAS	Accounts Payable – MAS
AR.MOD	Accounts Receivable – Modifications Library
ARLIB	Accounts Receivable
CODGL	General Ledger
CSAARLIB	Accounts Receivable – CSA
CSAARMOD	Accounts Receivable Modifications – CSA
CSAFULIB	Fuel – CSA
FALIB	Fixed Assets
FULIB	Fuel
PR.MOD	Payroll Modifications
PRLIB	Payroll
UTILITY	Utility / Miscellaneous

VII. Source Libraries – Test / Obsolete

JEBLIB	James Burgess Work Library
JEBLIB2	James Burgess Work Library #2
OBSOLETE	Obsolete Source

A. Modification Procedure

Copy the current source from the appropriate source library to a “working” copy in JEBLIB (James Burgess Work Library). The source is changed, compiled, and tested in this “working” library.

B. Promote Modifications to Production

1. Copy the current “Production” version to a backup version in the same library (renaming it with “.1”, “.2”, etc. appended to end and indicating the date in the comment).
2. Copy the “Modified” source from JEBLIB to the appropriate “Production” library.
3. Re-compile into production library.

C. Restoring Previous Version to Production

1. Copy the current “Production” version to a backup version in the same library (renaming it with “.1”, “.2”, etc. appended to end and indicating the date in the comment).
2. Rename to appropriate “back-up” version to the “Production” name (drop the appended “.1”, “.2”, etc. from the end)
3. Re-compile into the production library.

1. Miscellaneous

When it is deemed that an object is no longer needed, the source code is copied to the “OBSOLETE” library and the source and object is deleted from the appropriate “Production” library.

APPENDIX E -

Source Code Management - MAC II

FOLDER STRUCTURE

\\AirT7\MAC2	Execution Share
\\AirT6\ITDev\New MAC	MAC II Code Location
Production	Current version linked to production database
Backup YYYY.MM.DD.mdb)	Previous versions (naming convention: MAC
Source Code	Current version linked to development database
Backup YYYY.MM.DD.mdb)	Previous versions (naming convention: MAC

MODIFICATIONS

Copy the current version from the "Source Code" folder to a "Working" folder

PROMOTE MODIFICATIONS TO PRODUCTION

1. Copy the current "Production" version to the "Production Backup" folder and rename indicating the current date (ex: MAC 2007.11.01.mdb)
2. Copy the current "Source" version to the "Source Backup" folder and rename indicating the current date (ex: MAC 2007.11.01.mdb, same name as production)
3. Copy the current "Source Code" version to the "Staging" folder
4. Add/Replace/Delete objects in the mdb in the "Staging" folder with objects from the mdb in the "Working" folder
5. Verify changes to the mdb in the "Staging" folder
6. Copy the mdb from the "Staging" folder to the "Source" folder
7. Modify the mdb in the "Staging" folder to point to the production database
 - a) In basGlobalVariables:
 - Change MACSERVER constant to reference the production database
 - Change SPLASH_VER constant to the new version number
 - Change SPLASH_DTE constant to the new version date
 - b) Update table "aacode" to a value other than OK to force a database re-link

- c) Press the F12 key to re-link the mdb to the production database
 - d) Compact the database
 - e) In the Tools/Startup menu
 - Set "Display Form/Page" to frmSplash
 - Uncheck all options
8. Copy the mdb in the "Staging" folder to the "Production" folder
 9. Copy the mdb in the "Production" folder to the execution share: \\AirT7\MAC2

RESTORING THE PREVIOUS VERSION TO PRODUCTION

1. Delete the mdb in the "Production" folder
2. Copy previous version from the "Production Backup" folder to the "Production" folder
 - a) Rename to MAC.mdb
3. Delete the mdb in the "Source" folder
4. Copy previous version from the "Source Backup" folder to the "Source" folder
 - a) Rename to MAC.mdb
5. Copy the mdb in the "Production" folder to the "execution share"

MISCELLANEOUS

When the "Production Backup" folder contains a large number of mdb's, they are copied off to CD and filed. The backed up mdb's are then deleted from the "Production Backup" folder. The corresponding mdb's are also deleted from the "Source Backup" folder.

APPENDIX - F

Example of the sign off email.



The screenshot shows an email client window titled "Work Order Information Post to MAC II - Message (Rich Text)". The window has a menu bar (File, Edit, View, Insert, Format, Tools, Actions, Help) and a toolbar with icons for Reply, Reply to All, Forward, Print, and other actions. The email content is as follows:

Follow up by Wednesday, March 19, 2008 17:00.

From: James Burgess
To: Cheryl Sigmon; Sharon Gray; Jane Armstrong
Cc: Eddie Long; James Burgess; Tammy Hawn
Subject: Work Order Information Post to MAC II

Sent: Wed 03/12/2008 15:27

Cheryl,

We have put into place the Work Order Information post to MAC II. As you know, in the past, after a Work Order was sent to FedEx, accounting had to manually go into the MAC II system and update the work order with the A/R Invoice number and date sent to FedEx. We are now automatically capturing this information in the accounting system on the AS/400 at the time the invoice is posted into A/R. There is then a nightly process that will automatically run and post the information to MAC II. E-mails will be generated and sent to Cheryl, Sharon, and Jane showing the status of the work order updates. The e-mail will show a summary line of how many work orders were updated successfully, and will also have an attachment that shows the detail of each individual work order that was updated and the information that was updated.

Please verify this information against the invoices that you send to FedEx to ensure that everything is correct.

- Each work order that was posted to A/R should be listed on the detail report (ie, just because it says 16 of 16 were updated, you should make sure that there wasn't supposed to be 18, or 14, etc.). Make sure that the work orders listed are the actual work orders sent.
- Check each work order in the MAC II system to ensure that the information was actually updated correctly (and the same as the detail report shows).
- The detail report shows each work order along with the A/R number and FedEx date that was in the MAC II system, as well as the "updated" A/R number and FedEx date that we are updating it to. Ideally, the "original" MAC II A/R number and FedEx date will always be zero, and will then show what the updated information is. If you have a work order that already has a A/R number and/or FedEx date, and it shows on the detail report with a new A/R number and FedEx date, this should be investigated by accounting to determine why it is being updated again.
- On days that there are no work orders posted to A/R, you will still get an e-mail; but it will say "Updated 0 of 0 Work Orders". If you ever get an e-mail showing 0 work orders updated; but you think that there should have been some, you should contact IT immediately so that we can determine if there is a problem. Likewise, if you do not get a daily e-mail, you should contact IT immediately. There should be an e-mail everyday (even Saturday and Sunday) showing the update count for that day.

Please check this information carefully and contact IT immediately if you have any questions or concerns about anything relating to the automatic update process.

After you have had a chance to review the above project information and are satisfied that everything is correct and complete, please respond (via e-mail) to the IT department so that we can "close" this project request. Any questions, concerns, or modification requests should also be sent to the IT department via e-mail (not a phone call), so that we have an audit trail. Once you have signed off on this project, it will be closed. If, after the project is "closed", you determine that there needs to be additional modifications, you will need to submit that request as a new project request.

Thanks,
James Burgess