

### Change Action Release 5.06 Available

Change Action release 5.06 is now available. This release supports external Year 2000 date formats for all Change Action date display and data entry fields. In release 5.06, the Change Action Global Administrator can define which external date format will be used in the product.

Internally, Change Action has always been able to handle dates well beyond the year 1999. All dates are converted to Change Action's internal format before being written to the database.

All date comparisons and calculations are performed using this internal format. This new release allows the installation to define the external and visible date format that is to be used within their Change Action environment.

The available external date format options in Change Action release 5.06 are *yyyymmdd* (for example 19971231) or the existing Change Action format of *ddmmmyy* (as in 31DEC97). For the standard *ddmmmyy* format, Change Action uses January 1, 1980 as the boundary point, where *yy* of 80 represents 1980, and *yy* of 79 represents the year 2079.

The other available format of *yyyymmdd* complies with the ISO 8601 standard for date formats. Regardless of which external date format is selected by the Global Administrator, the internal Change Action processing remains the same.

Change Action users can enter dates into any date input fields (such as on SCAN selections, templates, date field selection masks, etc.) using either date format, and the value entered will automatically be converted to display in the format specified by the Change Action Global Administrator.

The administrator can now specify the installation defined default date format in the Global Params option. The new parameters specification screen is displayed as follows in release 5.06:

```

C/Action 5.06 ----- GLOBAL PARAMS -----
SELECT OPTION ==>
Environment: ISPF 4.3MVS      TSO      97.289  97/10/16 17:51
=> 399  Max kilo-bytes of a backup copy to reside on disk DB.
=> 7    Num of days the change request should be kept after expiry date.

=> YES  ISO date format (YYYYMMDD) - No-DDMMYY  Today = 19971016
=> SW   Enter HW for hardware clock or SW for software clock.
HW clock = 21:51:09.48 THUR OCT 16, 1997 (97.289)
SW clock = 17:51:09.48 THUR OCT 16, 1997 (97.289)

Trace SYSOUT => X  Batch STEPLIB => $$
CLIST Library => MZ.PROD.CLIST
Administrator(s) => MZ01 => MZ02 => MZ03 => MZ04 => MZ05
=> MZ06 => MZ07 => MZ08 => MZ09 => MZDADMN

PDSMAN => NO /*SETUP => NO
Security: RACF
  
```

All Change Action panels which display date values use the Global Parameters defined format to display the external date.

The other visible change included in release 5.06 is that the Change Action Primary Selection panel has been slightly reorganized to regroup the many Change Action options by

functional category. The Primary Selection Panel now appears as follows in release 5.06:

```

Change Action 5.06 ----- PRIMARY SELECTION PANEL ----- MAIN DB IS 83% FULL
SELECT OPTION ==>

----- OPTIONS -----
. G  Global Options
. OID Owner/Resources IDs (OIDs)
. UG  User Groups
. O   Dataset Options
. EX  Excludes Feature
. CPX Changeplexes
. U   Userid Information
----- CHANGE TRACKING -----
. D  Datasets Changed
. S  Selection Criteria
. SC Scan all Changes
. SCT Change Selection Templates
. OPTS Test Dataset Options
----- REFERENCE TRACKING -----
. RT Data Sets for Ref. Tracking
. RTM Ref. Tracking by Members
. X  Exit

----- BACKGROUND -----
. B  Batch Job Submission
. J  Batch Job Parameters
. R  Reports
. LUB LULU Batch Functions
. ELI External Language Interface
----- CHANGE CONTROLS -----
. A  Change Request Authorization
. C  Change Requests
. BL Change Blackout Windows
. M  Multi-User Update Control
. INF Info/Management Interface
----- MISCELLANEOUS -----
. CD Change Distribution
. V  Version Management
. STAT Show Change Action Status
. COMP Compare Utility

Action Software International (905) 470-7113
  
```

Other enhancements included in release 5.06 are:

- when a change request is FORCED, and if it requires approval, then the approvers will be notified;
- you can now override "Approval Required" at the member level;
- Reference Tracking now includes full support for the dynamic Inklst facility introduced with OS/390 V1R3.
- The Info/Management interface now displays the origin Changeplex for a change request that originated at a different Changeplex.

If you need more detailed information regarding Change Action release 5.06, or if you want to order your upgrade tape, contact your Action Software representative.

### Tracking & Controlling Y2K Changes

The Year 2000 presents an enormous challenge to the Information Technology industry.

Critical *business* and *strategic* decisions must be made in determining which applications or systems will need to be converted or replaced.

In most MVS sites however, many "legacy" and "core business" backbone applications and systems will need to be converted for *operational* or *economic* reasons.

There are several Internet Web sites, Y2K Industry Associations, and Y2K conferences, that clearly define the history of the problem, outline the technological options, and provide planning and process information that can help you address the issues within your organization. (cont'd on page 2)

<b>Inside This Issue .....</b>	<b>Page</b>
Change Action Release 5.06 Available .....	1
Tracking & Controlling Y2K Changes .....	1
Contact Information .....	4

---

---

*(Tracking & Controlling Y2K Changes - continued)*

Many of the Web sites dealing with the Y2K topic are run by hardware and software manufacturers, system developers, Year 2000 Systems Integrators, IT industry leaders, and educational institutions, all of which can provide unique insights into various logical views of the same basic problem.

From December 1, 1997, there are about 760 calendar days left until the big event. When calculated using an average 18 working days per employee per month (when taking into consideration statutory and legal holidays, vacations, etc.), for the average person it is only about 450 working days away.

With limitations on *time* and *resources*, the decisions to replace or convert systems are not easy ones. They are also usually underestimated in the overall complexity and manpower requirements of the tasks at hand, especially since the clock is continually ticking.

As well, most companies will encounter their exposure to Year 2000 date problems long before the New Years party is even being planned. Any businesses which deal with long term dates, such as banks, financial institutions, heavy manufacturing, etc., will meet the problems very early on.

From a technical perspective, there are many options available to support Y2K internal date processing functions. These can include:

- *Century windowing*, such as fixed or sliding century windows with a defined base date such as 1980;
- *Date encapsulation* or *bridging*, where middleware is used to emulate and correct date formats;
- *Full scale internal and external date format conversions*, where all databases, screens, reports, and interfaces are all modified to accept and process 4-digit year fields.

After the most suitable date conversion option is selected, based on the application's or system's requirements, projects and conversion activities must then be initiated and prioritized.

Depending on the size and scope of these systems, it may be further necessary to partition these larger systems projects into smaller, more manageable activities.

Eventually, the Y2K project management team will have to either "*freeze*" the existing code or components, or implement a process for "*controlled and managed*" changes to the production system environment.

This will ensure that valuable resources are not wasted in having to retrofit system code already modified to support Y2K with changes which have been made to production components for either business, operational, or emergency fix reasons.

This article does not attempt to address the specific issues regarding Y2K project management, nor provide detailed technical analysis of available options for managing Y2K projects. It does however attempt to offer some creative application of using Change Action to track and control changes to MVS based systems and applications.

In many Y2K industry papers and presentations, *effective change tracking and control* is identified as an essential and key component of any successful Y2K project.

If the decision has been made to convert existing MVS

systems to support the new Year 2000 date formats, then the process of identifying, isolating, partitioning, managing, controlling, converting, testing and implementing the new Y2K changes begins.

Also, change management and control is an important issue regardless if the required Y2K changes are being performed in-house or by outside third party system integrators.

The need for change control, especially in Year 2000 projects is fundamental. Effective change control will:

- allow Year 2000 project management to monitor the status of system code changes;
- allow the Year 2000 project team to control Y2K test environments and processes;
- allow the production system support groups to monitor any further changes to production systems after a "*freeze*" or period of "*controlled changes*" is established;
- provide a mechanism for Y2K and production support staff to easily identify components or systems which need to be retrofitted with the latest production changes;
- provide a method to audit and compare changes to ensure that pre-Y2K date formats have not been re-introduced into systems that have already been converted.

Change control also provides a method of communicating, approving and tracking changes that are made to either the Y2K project or production system environments.

The following sections provide some examples of how Change Action's product features can be used to support Year 2000 project initiatives.

### **Reference Tracking**

First and foremost, it would be nice to know exactly which systems, components, datasets and members are being used.

With Change Action Reference Tracking, accesses to datasets, source modules, object libraries and load modules can be monitored to determine exactly which ones are being used and by whom.

Also, when multiple system and component libraries are being tracked, reports can be generated that show exactly which datasets and members were referenced, and which ones were not.

By turning the reference tracking feature on *now*, more detailed statistical information can be collected about references to identified datasets.

This option can help determine which libraries, datasets, or products are redundant or no longer in use.

### **Reference Tracking by Member**

In cases where only a member or program name is known, Change Action's Reference Tracking by Member option can resolve where it was found, and who used it.

Detailed statistics are maintained regarding specific accesses to the member name in any dataset, regardless of type (such as source, object, load, JCL, etc.).

### **Tracking and Controlling Changes**

Regardless if your Y2K changes are being done in-house, or by third party integrators, change control will need to be implemented on both the current production image of the

components, as well as the Y2K library image. Business or operational demands will usually require that changes be made to the existing production components.

Unless your site has the ultimate luxury of freezing all components from modification during the entire Y2K conversion period, changes will still need to be requested, approved, implemented, tracked, identified and distributed.

Essentially, Y2K conversions and standard day to day changes are, in essence, parallel development of the same components, and eventually the two will need to be merged (see figure 1).

Without automated tracking tools and utilities, this can become a tedious and time-consuming activity to attempt to perform manually.

Change Action's unique and dynamic tracking and control mechanisms will allow you to meet and exceed your change tracking and control requirements, without impacting the already tight Y2K conversion schedules and timelines by making support staff deal with entirely new processes.

Change Action's automatic backup facility will also ensure that backups of all changes that are made are taken. *Note: You should ensure that the allocated Change Action database is large enough for the number of automatic backups to be taken.*

**Defining Y2K Datasets to Selected OIDs**

If your site will be freezing and copying the existing system components to equivalent Y2K conversion libraries, Change Action OIDs can be used to group related components or Y2K conversion partitions.

Depending on the size and scope of the Y2K activities, all of the datasets can be defined to a single Year 2000 project OID (such as Y2KPROJ).

If the systems are much larger and require partitioning into smaller more manageable pieces (such as mini projects or subsets), then the Year 2000 OIDs can be assigned uniquely by system code such as Y2KAPP1, Y2KAPP2, etc.

All of the corresponding development environment datasets (including source, object, JCL, control cards, load and others) should be defined to their associated OIDs.

This will allow detailed and simplified tracking, control and reporting of Y2K project specific changes.

It will also provide a mechanism for monitoring conversion activities and project activity status by showing exactly what has been modified, and what has not.

**Define Tracking and Control Options for Production Datasets**

If you have not already done so, you should define the existing production systems datasets to Change Action tracking and control options immediately when the Y2K library "freeze" or period of "controlled changes" is implemented.

This will allow both the IT management and the Y2K project team to specifically monitor any and all changes that are being made to the existing production system.

It also provides a method for requesting and approving changes, and ensuring that all changes are communicated to, and/or approved by, the Y2K project team.

**Monitoring Progress (Change Tracking)**

Using the Datasets Changed option, all changes that have been made to either the production system or Y2K project datasets and libraries can be viewed instantly.

Backups can be automatically scheduled whenever a component change is made, and detailed Compare Facility reports can be created to view the exact contents of the change for either auditing or quality assurance purposes.

**Change Requests for Y2K and Production Systems**

Using the Change Request options, Year 2000 team members can be added to the user groups that need to approve, or at least be notified of production system changes.

By including the Y2K project user groups in the change request process, or by defining that the Y2K team needs to approve all changes made to the production system, the impact analysis of the change, or the requirement of having to perform a retrofit of the change at a later date, can be quickly

and efficiently addressed from the very beginning.

Change requests can document exactly what was changed and why. By implementing a joint approval mechanism between production support and the Y2K project team, communication between the two groups will be improved, and both teams can take advantage of a central repository of what has been changed in their environment. (cont'd on page 4)

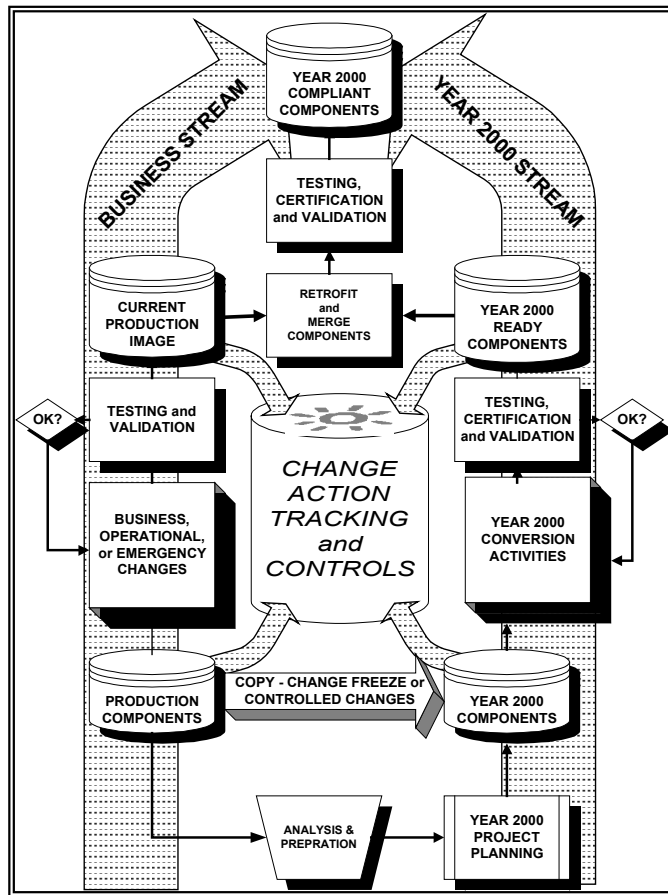


Figure 1 - Business and Y2K Development Streams

---

---

Remember that Change Action's unique control mechanisms will ensure that a change cannot be made unless a change request is opened, and optionally approved, by any number of user groups.

### ***SCAN Templates and Customized Reports***

Pre-defined SCAN changes templates and canned reports can be used to regularly report on change activity in both the production system and Y2K project environments.

Both features are dynamic and instantaneous, and will provide an accurate picture of what, and how many components, have been modified, and by whom.

### ***Full Changeplex Support***

If your production systems incorporate multiple systems or sites, Change Action's Changeplex support can also track, monitor and control changes being implemented in other locations. Instant views and detailed reports can be provided to list any production changes from remote locations that could impact the Year 2000 project.

### ***Standardized Change Request Reason Codes***

Within the OID for the Y2K project, specific, pre-defined reason codes and environmental codes can be used to easily select the type of change which was made or test case that was executed. Up to 32 unique environmental components and 32 unique change reason codes can be defined to each OID.

### ***Y2K Test Environment Promotion Levels***

Even within a Y2K project environment, various promotion levels may be required to perform unit testing and Y2K certification testing.

If multiple promotion levels are defined, change controls can be implemented strictly in the Y2K environment to ensure that one group's changes to common components or system subroutines do not affect other groups that share the same Year 2000 testing environment.

### ***Automated Change Distribution***

If the Year 2000 testing activities are taking place on another system or at a completely remote site, Change Action's Automated Change Distribution facilities can be used to automatically distribute the changes.

Users can define either simple library to library COPY jobs that can migrate the change from one environment to another, or utilize your own file distribution products to transmit the changes to other data centers or sites.

This also applies to larger companies that are centralizing all Y2K project development activities at one site or location and testing activities at another. When a component (such as a load module) has been updated on one system, it can be automatically copied to another system without any human intervention.

### ***Using Version Release Management to Identify Baselines***

Change Action's Version/Release Management facility can be used to identify and group either baseline systems or milestone deliveries of completed systems or components. Testing environments can be flagged and frozen while certification and validation testing of the Y2K system and components is performed.

### ***Retrofitting Changes Production to Y2K or Vice-Versa***

The Compare Utility can be used to identify differences in components, from a module down to a specific byte level. If a defined freeze period was not implemented, all production system changes will need to be reviewed and possibly retrofitted against the Y2K components to ensure that current production functionality is not lost with the introduction of Year 2000 code.

The Compare Utility will show the users the exact differences between the current production image and the Year 2000 image. For changes that are small in nature (for example, less than 100 lines), the Compare Utility MERGE option (*which requires Change Action version 5.05 or greater*) can be used to match/merge the contents of the production system and Y2K system source components.

### ***Summary***

Change Action has many features and functions that can help your MVS installation manage and control Year 2000 project changes.

Best of all, all of these features and functions execute transparently in the background, and work in conjunction with all of your existing processes and procedures. The best way to determine if any of the features listed here are applicable to your company's Year 2000 initiatives is to try them out, and see what they can do for you.

## **Contact Information!**

If you require more detailed information about Change Action, we can be reached at:

**Action Software International  
20 Valleywood Drive, Suite 107  
Markham, Ontario  
Canada, L3R 6G1**

**Phone: (905) 470-7113  
Fax: (905) 470-6507  
E-Mail: [Change@ActionSoftware.COM](mailto:Change@ActionSoftware.COM)**

**In Europe, contact Action Software GmbH at:**

**+41 61 22694 94**

Address correspondence to: The Editor at Change Action News.  
Copyright © 1997 Mazda Computer Corporation  
Action Software International is a division of Mazda Computer Corporation.  
Change Action is a registered trademark of Mazda Computer Corporation.  
Changeplex is a registered trademark of Mazda Computer Corporation.  
All other trademarks and registered trademarks are the property of their respective owners.  
May not be reproduced without permission. All rights reserved.  
Information subject to change without notice.