

Primavera Project Planner®

Batch and File Structures

Version 3.0

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Using the P3 Batch System

In this chapter:

Overview

General Rules for Batch Processing

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Sample Run Streams

Batch processing is a fast and powerful way to create and update Primavera projects. By eliminating the interactive user interface, batch processing can complete many of your regular updating processes in less time than when using the interactive mode.

Overview

The P3 Batch system makes it easy to develop complex project networks because it enables you to input large quantities of data at one time. It also enables you to quickly update resource and cost data. The batch file provides a record of all entries and changes to the project database.

Use the Batch system as an alternative way to input data, or in conjunction with the interactive program. For example, first run the interactive program to set up the foundation for a new project, and then use the Batch system to add detailed activity records to complete the project network.

P3 uses the Btrieve record management system to handle project files. Primavera Systems provides the necessary Btrieve record manager program (copied to your programs directory when you install P3) that invokes and releases Btrieve as necessary. You don't need the complete Btrieve system for normal operations; you will need it, however, if you want to access project files outside the program interface. The complete system includes the utility package program and a set of programming language interfaces and object modules. You can also use the query and report writing systems, Xtrieve and XQL, to extract information from P3 project files. Btrieve, Xtrieve, and XQL are available from Btrieve Technologies, Inc.

P3 checks new data thoroughly for accuracy before adding them to the database. Files produced or modified externally using systems such as Btrieve and XQL may not be supported and may cause errors while you are using either program.

Batch record layouts The *Standard Records* chapter lists record layouts for creating, adding to, and updating projects.

Batch input files Instructions to the batch processor are provided as data records in a plain text file. Each record or line in the data file contains a specific instruction to the batch processor, and each instruction corresponds to a function or dialog box in the interactive system.

Although you can create data files for the Batch system using spreadsheet or database software, Primavera recommends using an ASCII- or ANSI-based text editor. You should become familiar with the text-editing procedures for creating and saving text files before you begin using them for batch processing.

Run streams, commands, and records One batch input file can instruct the batch processor to perform one operation on one project or many operations on the same project. It can also address more than one project. Each set of records that performs an independent operation is called a run stream. For example, a batch input file can contain one run stream to add a project and define calendars, another to define project dictionaries, and a third to add activities and relationships.

Record sequence The batch processor searches for three categories of records in a batch input file:

- Command records always precede definition data. These records, also known as PROJ records, identify a project and instruct the processor to execute specific commands. Every run stream begins with a PROJ record containing a command. The last record in an input file must be a PROJ record with the END command.
- Project-level data records provide detailed instructions about the project schedule, calendar, nonworkperiods, activity codes and titles, resources and titles, resource calendars, cost accounts and titles, and report titles. Project-level records follow command records.

- Activity-level data records define specific data about activities, such as durations, precedence relationships, resource and cost data, and constraints. These records always follow the EXECUTE command. The initial entry of activity data in a new project begins with an INPUT record. Every subsequent update to activity information begins with an UPDATE record. An activity-data run stream ends with a RETURN record.

General Rules for Batch Processing

To use the Batch system successfully, follow these rules:

- Use up to eight characters for the batch input file name and up to three characters for an optional filename extension.
- Place data records in the correct sequence.
- Type all commands in uppercase letters. Titles and descriptions can be uppercase, lowercase, or mixed.
- Do not type alphabetic data in numeric fields. Data must be justified to the left or right within each field as specified.
- Leave blanks in the first four spaces of a record if you want the Batch system to skip the record. Use the remainder of the record to record comments in the file.
- Verify your data before processing. The Batch system checks the data only for correct format and sequence.
- Correct a mistake by creating a “reversing” entry. It is usually better to use the interactive mode for small changes.
- Avoid processing the same batch file twice by clearly naming your files.
- Back up your project files as well as your batch files.

Processing the batch input file You must create a batch input file before you can use the P3 batch data-entry system. For instructions, refer to *Generating an Input File* in the *Sample Run Streams* section later in this chapter.

To set up the P3 Batch system program icon

1. From Program Manager, open the group window that you want to add the program item to.
2. Choose File, New. Select Program Item, then click OK.
3. Type PRMBATCH.EXE in the Command line field, and the path to the file in the Working directory field. For example,

Command line: PRMBATCH.EXE

Working directory: C:\P3WIN\P3PROGS

4. Click OK.

To process a batch input file

1. Double-click the P3 Batch icon.
2. Choose the file extension that you want to use (.P3 or, for backward compatability with Finest Hour projects, .FH).
3. Select the input file in the File Name field and click Run.

If necessary, use the Drives or Directories list boxes to display input files from other locations. To change the projects' directory, click the Dir (directories) button.

Output is directed to the file P3.OUT unless you specify another filename in the batch run stream.

4. Click Exit.

You should set your USERLOC to a different directory than the project's directory. This prevents your input files from being overwritten by another user who is processing a batch file at the same time as you.

Experiment with the Batch system on a test project before using it on an active project. Also, back up your projects before updating with the Batch system (choose Tools, Project Utilities, Back Up).

The program processes the file in its entirety through the batch routines and then tests the data. Diagnostic messages are directed to the P3.OUT file, a designated filename, or the printer specified in the first PROJ record of the batch file. If P3 detects no errors, the diagnostic report includes an audit trail of the selected batch commands. The following figure shows part of a diagnostic report.

```

PROJ APX2 ADD
-----PROJECT-APX2 ADDED
DAILY PROJECT CALENDAR SPECIFIED
PROJ APX2 CALENDAR          MON  Y
WHEN GENERATING CALENDAR, WEEKEND HOLIDAYS WILL BE MOVED TO NEAREST WEEKDAY
PCAL 25JUL99      19JUL00                      13FEB01
-----CALENDAR SPECIFICATIONS INSERTED
MCAL 1          MON  FRI          CALENDAR 1 DAILY MON TUE WED THU FRI
                                MHOL 1  H   21FEB00
                                MHOL 1  H   30MAY00
                                MHOL 1  H   5SEP99
                                MHOL *  H   1JAN
                                MHOL *  H   4JUL
                                MHOL *  H   25DEC
                                MHOL *  H   6SEP00
                                MHOL *  H   25NOV99      26NOV99
-----      8 HOLIDAY(S) INSERTED

```

To increase the Batch system processing speed, you may choose to suppress automatic data validation by placing an X in column 8 of the INPUT/UPDATE record; however, keep in mind that without validation you risk introducing invalid data. Suppress data validation only after thoroughly checking your data.

P3 Screen/Batch Function Table

The following table lists common functions and their associated interactive dialog boxes and batch commands. Refer to the next chapter for detailed information about individual record layouts.

Function	Interactive Command	Batch Command/ Record Type
Add a new project group	File, New	CALENDAR, PCAL, MCAL, MHOL, RCAL, RHOL/ADD
Define project titles	File, New or File, Project Overview	DRT1-2/ TITLE DATA
Define an activity coding structure	Data, Activity Codes: Activity codes option, Activity ID option, and Aliases option	CDEF/ TITLE DATA
Define a WBS coding structure	Data, WBS: Structure button	WBSD/ TITLE DATA
Define custom data items	Data, Custom Data Items: Activity or Resource options	CUSD/ TITLE DATA
Define nonlinear distributions	Data, Resource Curves	CURV/ TITLE DATA
Add a project to a project group	File, New	COTL, BRT1, BRT2 BCAL/ TITLE DATA
Define a Cost account structure	Data, Cost Accounts	ACAT/ TITLE DATA
Change an existing calendar	Data, Calendars	CALENDAR, PCAL MCAL, MHOL, RCAL, RHOL

Function	Interactive Command	Batch Command/ Record Type
Copy an existing project	Tools, Project Utilities, Copy	COPY AND RENAME
Print a calendar list	Data, Calendars, Print button	CALENDAR LIST
Define a baseline plan	File, Project Overview, Targets	ESTABLISH TARGET
Delete a project	Tools, Project Utilities, Delete	REMOVE
Reset period cost and resource quantity	Data, Resources: Close Out button	PERIODCLOSEOUT
Add, delete, or change activity data	Insert, Activity; Edit, Delete; Edit, Edit	ACTV or ACTVR/INPUT or UPDATE
Assign custom-data-item values to activities and resources	Data, Custom Data Items	CDI/ INPUT or UPDATE
Define activity relationships	Successors and Predecessors Activity detail forms	PREC or SUCC PRED/ INPUT or UPDATE
Assign activity codes	Activity Codes detail form	CODE/ INPUT or UPDATE
Assign WBS codes	WBS detail form	WBSA/ INPUT or UPDATE
Add notes to activities	Log detail form	LIST/ INPUT or UPDATE
Assign resources	Resources detail form	RESR/ INPUT or UPDATE
Adjust target dates	Dates detail form	DATE/ INPUT or UPDATE
Set Autocost rules	Tools, Options, Autocost Rules	RULES
Begin run stream	N/A*	PROJ

Function	Interactive Command	Batch Command/ Record Type
End file	N/A*	END
Recalculate ETC	N/A*	ETC
Begin activity-specific data	N/A*	EXECUTE
End activity-specific data	N/A*	RETURN
Create records from existing project	N/A*	GENERATE
List interruptible activities	N/A*	INTERRUPT

** Not Applicable. These commands or records are specific to the Batch system and do not correspond precisely to any interactive feature in P3.*

Table conventions The record layout tables shown in this section use the following abbreviations and conventions.

- Contents
 - A for alphabetic data only
 - N for numeric data only
 - A/N for alphanumeric data
- Data justification
 - In general, numbers are justified to the right, and all other data are justified to the left:
 - L is for data justified to the left
 - R is for data justified to the right
 - C is for centered data
 - appears when no justification is required

- Valid data
 - For some records the Batch system recognizes the following numbering system for dictionary codes:
 - C01-C20 for activity code classifications 1 through 20
 - A01-A04 for activity-ID code classifications 1 through 4
 - In other cases, the actual code (DEPT, RESP) is used. Check the record layout tables to determine the correct format.
- Dates
 - Dates in batch run streams use DDMMYY format. For hourly projects, specify hours and minutes using HH:MM format.
 - DD is 01-31 for day of month, MMM is JAN-DEC for month of year; and YY is 70-99 for years in the 20th century (1970-1999) and 00-69 for years in the 21st century (2000-2069).
 - HH is 00-24 for hour, and MM is 00 for minutes in hourly projects. When using the interactive program, the completion time that appears on the screen is 1 minute earlier than specified. For example, 24:00 appears as 23:59.
 - Rolling dates, such as DD+3W or SD-2M, are valid for date fields only if they are valid for the corresponding field in P3.
- Calendars
 - Every project must have one calendar designated as calendar 1. The calendar ID can be any number from 1 through 9 or any letter from A through Z, excluding I, O, V, and W.
 - Every resource has a calendar, which is built from one of the project's calendars. Each resource calendar can have its own unique work schedule, holidays, exceptions, and so forth.

Sample Run Streams

This section provides sample run streams that demonstrate various batch commands and show you how they can be applied. Use these examples as models for building your own batch input files.

In a multiuser (network) environment, a valid username is required on the PROJ line (columns 51-58) in all run streams.

Generating an input file The following run stream generates the contents of a project group into one large text file that can be divided into individual run streams.

```
PROJ APEX GENERATE                                JOHN
GENERATE ALL  APEX  INTO C:\P3WIN\PROJECTS\APEXPROJ.OUT
PROJ APEX END
```

You can generate data from the sample project (APEX), or one of your own projects. Refer to the descriptions for the GENERATE command and GENERATE record layout for more information.

Adding a new project The following run stream adds a new project group and defines its calendar 1:

```
PROJ APEX ADD                                JOHN
PROJ APEX CALENDAR                          MON  Y
PCAL 27SEP99      19JUL99                      13FEB01
MCAL 1           MON  FRI                      Calendar 1 Daily MON TUE WED THU FRI
MHOL 1  H  21FEB00
MHOL 1  H  30MAY00
MHOL 1  H  5SEP00
MHOL *  H  1JAN
MHOL *  H  4JUL
```

```

MHOL *   H   25DEC
MHOL *   H   6SEP99
MHOL *   H  25NOV99      26NOV99
RETURN
PROJ APEX END

```

Defining network relationships Use the INPUT record when you first add network data to the project. Use the UPDATE record for subsequent runs. The following run stream contains all the basic network definitions:

```

PROJ APEX EXECUTE                                JOHN
INPUT  YES YES
ACTVAAS100    0 10 Define System Requirements      1
ACTVAAS101    0 20 System Design                  1
ACTVAAS102    0 10 Approve System Design           1
ACTVAAS103    0 18 Install Robot Base              1
ACTVAAS104    0 13 Run Sealant, Air, and Water Piping 1
ACTVAAS105    0 20 Install Temperature Control Equipment 1
ACTVAAS106    0 18 Set & Connect Robots            1
ACTVAAS107    0 30 Install System & Misc. Components 1
PREC AS100    AS101
PREC AS101    AS102
PREC AS101    AS204    FS    -10
PREC AS101    AS216    FS    -10*
PREC AS102    AS310          *
PREC AS102    CS300
PREC AS103    AS105
PREC AS104    AS105    SS     5
PREC AS105    AS106          *
PREC AS106    AS107          *
RETURN
PROJ APEX END

```

First add all activities in ACTV records, then define relationships in PREC (precedence) records. When you use an INPUT record, you must define the activities referenced by the PREC records in the same run stream; when you use an UPDATE record, the activities must already exist in the project or must have been specified in earlier ACTV records in the same run stream.

The Batch system verifies each record as it is processed and flags any data errors. It also identifies open ends (activities without predecessors or successors).

Building an Activity Codes Dictionary The following run stream defines the activity coding structure for the project and then provides descriptions for the code values:

```

PROJ APEX TITLE DATA                                JOHN
CDEF CODE 1 3 DEPT Department
CDEF CODE 2 8 RESP Responsibility
CDEF CODE 3 13 PHAS Phase
CDEF CODE 4 18 STEP Step
CDEF CODE 5 23 ITEM Item
CDEF ACT 1 2 SUBP Project ID
COTL C01          CON Construction Department          4
COTL C01          ENG Engineering Department           1
COTL C01          ISD Information Systems Department    3
COTL C01          PCH Purchasing Department             2
COTL C02          ACME Acme Motors - Owner              6
COTL C02          EVANS Tim Evans - Program Manager     4
COTL C02          FOLEY Meg Foley - Purchasing Manager  5
COTL C02          HARIS Linda Haris - Director of Software Engineering 3
COTL C02          MASON Andy Mason - Director of Development 1
COTL C02          MILLS Tom Mills - Director of Hardware Engineering 2
COTL C02          NOLAN Joe Nolan - Construction Manager 7
COTL C02          VENDR Vendor                          8
COTL C03          CLOSE Close-In Phase                  9
COTL C03          DESGN Design and Engineering Phase    1
COTL C03          FINSH Finishes and Closeout Phase     10

```

```

COTL C03          FOUND Foundation Construction Phase          6
COTL C03          INSTL Installation Phase                    5
COTL C03          PROCR Procurement Phase                     2
RETURN
PROJ APEX END

```

Assigning code values to activities The following run stream assigns activity code values to activities:

```

PROJ APEX EXECUTE                                JOHN
UPDATE    YES YES
CODE AS100    ENGMASONDESIGN    ASDSG
CODE AS101    ENGMASONDESIGN    ASDSG
CODE AS102    ENGMASONDESIGN    ASDSG
CODE AS108    ISDMILLSSYS1      HRDWR
CODE AS109    ISDMILLSSYS1      HRDWR
CODE AS200    PCHFOLEYPROCR     TEMPC
CODE AS206    PCHVENDRPROCR     TEMPC
CODE BA530    ENGACME PROCR      BRICK
CODE CS311    ISDMILLSINSTL     CNVYS
CODE CS770    ISDEVANSINSTL     CNVYS
RETURN
PROJ APEX END

```

Defining alias codes and assigning titles The following run stream defines an alias code and assigns titles to the combined codes:

```

PROJ APEX TITLE DATA                            JOHN
ALIA C03C02    DCAA PHAS + RESP                    255
COTL C03C02    CLOSENOLAN Close-In Phase-Nolan's Responsibility 255
COTL C03C02    DESGNACME Design Phase-Acme Motor's Responsibility 255
COTL C03C02    DESGNMASON Design Phase-Mason's Responsibility 255
COTL C03C02    DESGNNOLAN Design Phase-Nolan's Responsibility 255
COTL C03C02    FINSHNOLAN Finishes Phase-Nolan's Responsibility 255
COTL C03C02    FOUNDNOLAN Foundation Phase-Nolan's Responsibility 255

```

```

COTL C03C02      INSTLEVANS Installation Phase-Evans' Responsibility      255
COTL C03C02      INSTLMILLS Installation Phase-Mills' Responsibility      255
COTL C03C02      PROCRCACME Procurement Phase-Acme Motor's Responsibility 255
COTL C03C02      PROCRFOLEY Procurement Phase-Foley's Responsibility      255
COTL C03C02      PROCRMASON Procurement Phase-Mason's Responsibility      255
COTL C03C02      PROCRNOLAN Procurement Phase-Nolan's Responsibility      255
COTL C03C02      PROCRVENDR Procurement Phase-Vendor's Responsibility      255
COTL C03C02      ROUGHNOLAN Rough-In Phase-Nolan's Responsibility          255
COTL C03C02      STRUCNOLAN Foundation Phase-Nolan's Responsibility        255
COTL C03C02      SYS1 EVANS System Integration Phase 1-Evans' Responsibility255
COTL C03C02      SYS1 HARIS System Integration Phase 1-Haris' Responsibility255
COTL C03C02      SYS1 MILLS System Integration Phase 1-Mills' Responsibility255
RETURN
PROJ APEX END

```

Building a WBS Codes Dictionary The following run stream defines the WBS coding structure for the project and then provides descriptions (titles) for the codes:

```

PROJ APEX TITLE DATA                                JOHN
WBSD      1  2  .
WBSD      2  2  .
WBSD      3  1  .
WBSD      4  1  .
WBST      AM                      Acme Motors Expansion Project
WBST      AM01                    Automated System
WBST      AM011                   System Engineering
WBST      AM012                   Hardware
WBST      AM012A                  Temperature Control Equipment
WBST      AM012B                  Robot Controller
WBST      AM012C                  System Controller
WBST      AM013                   Software
WBST      AM014                   Training
WBST      AM014A                  Manuals
WBST      AM02                    Conveyor System
WBST      AM021                   System Design and Engineering
WBST      AM022                   Field Operations

```

WBST	AM022A	Installation
WBST	AM022B	Onsite Testing
WBST	AM023	Materials
WBST	AM023A	Conveyors
WBST	AM023B	Operation Manuals
WBST	AM03	Office Building Addition
WBST	AM031	Design and Engineering
WBST	AM032	Foundation
WBST	AM033	Structure
WBST	AM034	Mechanical/Electrical Systems
WBST	AM034A	Elevator
WBST	AM034B	HVAC
WBST	AM034C	Plumbing and Electrical
WBST	AM035	Exterior Finishes
WBST	AM035A	Brick
WBST	AM035B	Roof
WBST	AM035C	Doors and Windows
WBST	AM036	Interior Finishes
WBST	AM036A	Plumbing and Lighting Fixtures
WBST	AM036B	Floor and Carpeting
WBST	AM036C	Carpentry
WBST	AM036D	Paint
RETURN		
PROJ APEX END		

Assigning WBS codes to activities The following run stream assigns WBS codes to activities:

PROJ APEX EXECUTE		JOHN
UPDATE YES YES		
WBSA AS100	AM011	
WBSA AS101	AM011	
WBSA AS103	AM012B	
WBSA AS104	AM012B	
WBSA AS105	AM012A	
WBSA AS106	AM012B	

WBSA AS107	AM012C
WBSA AS108	AM012C
WBSA AS109	AM012
WBSA AS110	AM012
WBSA AS111	AM012
WBSA AS112	AM012
WBSA AS113	AM013
WBSA AS114	AM012B
WBSA AS115	AM013
WBSA AS116	AM013
WBSA AS117	AM013
WBSA AS118	AM014A
WBSA AS150	AM013
WBSA AS201	AM012A
WBSA AS202	AM012A
WBSA AS204	AM011
WBSA AS205	AM011
WBSA AS206	AM012A
WBSA AS213	AM012C
WBSA AS214	AM012C
WBSA AS215	AM012C
WBSA AS216	AM011
WBSA AS218	AM012C
WBSA AS240	AM012
WBSA AS250	AM012C
WBSA AS260	AM012B
WBSA AS265	AM012
WBSA AS270	AM012B
WBSA AS275	AM012
WBSA AS280	AM013
WBSA AS285	AM013
WBSA AS310	AM012
WBSA AS315	AM012
WBSA AS500	AM013
WBSA AS600	AM013
WBSA AS900	AM01
RETURN	
PROJ APEX END	

Defining names for custom data items The following run stream shows how to build a Custom Data Item Dictionary using CUSD records:

```

PROJ APEX TITLE DATA                                JOHN
CUSDA  PLSTS07Planned Start      PLFN07Planned Finish
CUSDA  PARTC20Part Number        INSPC20Inspector
CUSDR  ORBCP09Orig Budget Cost   ORBQP09Orig Budget Qty
RETURN
PROJ APEX END

```

Assigning data to custom data items Use custom data item (CDI) records to assign activity or resource information to custom data items. You can define up to eight activity custom data items and eight resource custom data items per resource in a project. The following run stream shows information relating to custom data items:

```

PROJ APEX EXECUTE                                JOHN
UPDATE YES YES
CDI AS100                                PLST  19JUL00
CDI AS100                                PLFN  30JUL00
CDI AS100    ANALYST 11101    L  ORBC  1200.00
CDI AS100    ATM ENG 11101    L  ORBC  1760.00
CDI AS101                                PLST   2AUG00
CDI AS101                                PLFN  27AUG00
CDI AS101                                APPR   360.00
CDI AS101    ANALYST 11101    L  ORBC  4800.00
CDI AS101    ATM ENG 11101    L  ORBC  7040.00
CDI AS101    DES ENG 11101    L  ORBC  4800.00
CDI AS102                                PLST  30AUG00
CDI AS102                                PLFN  13SEP00
CDI AS102    ANALYST 11101    L  ORBC  1200.00
RETURN
PROJ APEX END

```

Building a Resource/Cost Account Dictionary The following run stream contains cost account categories and numbers, resource definitions, unit prices, and limits for resource leveling:

PROJ	APEX	TITLE	DATA	JOHN
RETL		11101		Automation System Design
RETL		11211		Temperature Control Equipment-Design
RETL		11213		Temperature Control Equipment-Install
RETL		11221		Robot Controller-Design
RETL		11223		Robot Controller-Install
RETL		11231		System Controller-Design
RETL		11233		System Controller-Install
RETL		11314		Software Processor
RETL		11415		Automation System Training & Manuals
RETL	ACCTS		Hrs	Accounts Manager
RATE	ACCTS	16.00		
RETL	ANALYST		Hrs	Analyst-Systems Automation
RATE	ANALYST	30.00		
RLIM	ANALYST	4	8 UNTIL	0 0 UNTIL
RETL	ATM ENG		Hrs	Automation Systems Engineer
RATE	ATM ENG	22.00		
RLIM	ATM ENG	8	16 UNTIL	0 0 UNTIL
RETL	DES ENG		Hrs	Design Engineer
RATE	DES ENG	30.00		
RLIM	DES ENG	16	24 UNTIL	0 0 UNTIL
RETL	ELECTRCN		Hrs	Electrician
RATE	ELECTRCN	32.00		
RLIM	ELECTRCN	40	48 UNTIL	0 0 UNTIL
RETL	EQUIPMNT			Each Equipment-Crane
RATE	EQUIPMNT	2980.00		
RLIM	EQUIPMNT	1	1 UNTIL	0 0 UNTIL
RETL	FLD ENG*		Hrs	Field Eng-All
RATE	FLD ENG*	25.00		
RETL	FLD ENG1		Hrs	Field Eng-Senior
RATE	FLD ENG1	25.00		
RLIM	FLD ENG1	8	10 UNTIL	0 0 UNTIL

```

RETL FLD ENG2          Hrs Field Engineer
RATE FLD ENG2    20.00
RLIM FLD ENG2      8      10 UNTIL          0      0 UNTIL
RETL FLD ENG3          Hrs Field Eng-Assistant
RATE FLD ENG3    17.00
RLIM FLD ENG3      8      8 UNTIL          0      0 UNTIL
ACAT C CONTRCTR
ACAT E EQUIPMNT
ACAT L LABOR
ACAT M MATERIAL
RETURN
PROJ APEX END

```

Assigning resource quantities The T in column 33 of each RESR record indicates that the amount applied to the activity is the total budget quantity of this resource. The TDQ in columns 56-58 indicates that the amount in columns 59-66 is the actual quantity to date. In columns 67-69, ETQ refers to the estimated quantity to complete. Compare these data to the RESR records shown in Assigning Resource Costs. The following run stream assigns resource quantities:

```

PROJ APEX EXECUTE          JOHN
UPDATE YES  YES
RESR AS100    ANALYST    40.00T 0      11101    LTDQ    40.00ETQ    .00
RESR AS100    ATM ENG    80.00T 0      11101    LTDQ    80.00ETQ    .00
RESR AS101    DES ENG    160.00T 0      11101    LTDQ    160.00ETQ    .00
RESR AS101    ANALYST    160.00T 0      11101    LTDQ    160.00ETQ    .00
RESR AS101    ATM ENG    320.00T 0      11101    LTDQ    320.00ETQ    .00
RESR AS102    PRG MGR    20.00T 0      11101    LTDQ    20.00ETQ    .00
RESR AS102    ANALYST    40.00T 0      11101    LTDQ    40.00ETQ    .00
RESR AS103    FLD ENG1   144.00T 0      11223    LTDQ    .00ETQ    144.00
RESR AS103    HWSPEC     72.00T 0      11223    LTDQ    .00ETQ    72.00
RESR AS104    PLUMBER    104.00T 0 13 11223    LTDQ    .00ETQ    104.00
RESR AS105    FLD ENG1   200.00T 0      11213    LTDQ    .00ETQ    200.00
RESR AS105    HWSPEC     80.00T 0      11213    LTDQ    .00ETQ    80.00
RESR AS105    ELECTRCN   200.00T 0      11213    LTDQ    .00ETQ    200.00

```

```

RESR AS106      FLD ENG2  144.00T  0      11223      LTDQ      .00ETQ  144.00
RESR AS106      HWSPEC      72.00T  0      11223      LTDQ      .00ETQ   72.00
RESR AS107      HWSPEC     240.00T  0      11233      LTDQ      .00ETQ  240.00
RESR AS107      FLD ENG3  240.00T  0      11233      LTDQ      .00ETQ  240.00
RESR AS108      HWSPEC      32.00T  0      11233      LTDQ      .00ETQ   32.00
RESR AS108      FLD ENG1  128.00T  0      11233      LTDQ      .00ETQ  128.00
RESR AS109      FLD ENG1  192.00T  0      11223      LTDQ      .00ETQ  192.00
RETURN
PROJ APEX END

```

Assigning resource costs The C in column 33 of each RESR record indicates that the amount applied to the activity is the budgeted cost of this resource. The TDC in columns 56-58 indicates that the amount in columns 59-66 is the actual cost to date. In columns 67-69, ETC refers to the estimated cost to complete. Compare these data to the RESR records shown in Assigning Resource Quantities. The following run stream assigns resource costs:

```

PROJ APEX EXECUTE                                JOHN
UPDATE  YES YES
RESR AS100      ANALYST  1200.00C      11101      LTDC 1200.00ETC      .00
RESR AS100      ATM ENG  1760.00C      11101      LTDC 1760.00ETC      .00
RESR AS101      DES ENG  4800.00C      11101      LTDC 4800.00ETC      .00
RESR AS101      ANALYST  5160.00C      11101      LTDC 5160.00ETC      .00
RESR AS101      ATM ENG  7040.00C      11101      LTDC 7040.00ETC      .00
RESR AS102      PRG MGR   673.00C      11101      LTDC  673.00ETC      .00
RESR AS102      ANALYST  1200.00C      11101      LTDC 1200.00ETC      .00
RESR AS103      FLD ENG1  3600.00C      11223      LTDC      .00ETC 3600.00
RESR AS103      HWSPEC   1224.00C      11223      LTDC      .00ETC 1224.00
RESR AS104      PLUMBER  3432.00C      11223      LTDC      .00ETC 3432.00
RESR AS105      FLD ENG1  5000.00C      11213      LTDC      .00ETC 5000.00
RESR AS105      HWSPEC   1360.00C      11213      LTDC      .00ETC 1360.00
RESR AS105      ELECTRCN 6400.00C      11213      LTDC      .00ETC 6400.00
RESR AS106      FLD ENG2  2880.00C      11223      LTDC      .00ETC 2880.00
RESR AS106      HWSPEC   1224.00C      11223      LTDC      .00ETC 1224.00
RESR AS107      HWSPEC   4080.00C      11233      LTDC      .00ETC 4080.00

```

```

RESR AS107      FLD ENG3 4080.00C      11233      LTDC      .00ETC 4080.00
RESR AS108      HWSPEC   544.00C      11233      LTDC      .00ETC  544.00
RESR AS108      FLD ENG1 3200.00C      11233      LTDC      .00ETC 3200.00
RESR AS109      FLD ENG1 4800.00C      11223      LTDC      .00ETC 4800.00
RETURN
PROJ APEX END

```

Closing out a period The following run stream resets all actual costs and actual quantities this period to zero:

```

PROJ APEX EXECUTE                                JOHN
UPDATE  YES YES
PERIOD CLOSEOUT
RETURN
PROJ APEX END

```

Assigning dates You can quickly assign dates to activities with the Batch system, using a run stream such as the following:

```

PROJ APEX EXECUTE                                JOHN
UPDATE  YES YES
DATE AS100      27SEP99      24SEP99      27SEP99      24SEP99
DATE AS101      27SEP99      24SEP99      27SEP99      24SEP99
DATE AS102      27SEP99      24SEP99      27SEP99      24SEP99
DATE AS103      29SEP99      22OCT99      7OCT99       1NOV99
DATE AS104      29SEP99      15OCT99      26OCT99      11NOV99
DATE AS105      2NOV99       1DEC99       2NOV99       1DEC99
DATE AS106      2DEC99       28DEC99      2DEC99       28DEC99
DATE AS107      29DEC99      9FEB00       29DEC99      9FEB00
DATE AS108      10FEB00      4MAR00       25FEB00      18MAR00
DATE AS109      10FEB00      16MAR00      10FEB00      16MAR00
DATE AS110      10FEB00      16MAR00      10FEB00      16MAR00
DATE AS111      17MAR00      17MAR00      17MAR00      17MAR00
DATE AS112      17MAR00      17MAR00      17MAR00      17MAR00
DATE AS113      1APR00       4APR00       1APR00       4APR00
DATE AS114      5APR00       5APR00       5APR00       5APR00
RETURN

```

PROJ APEX END

Setting Autocost rules The following run stream changes Autocost rules through batch:

```
PROJ APEX RULES      Y N SN YYY YY Y Y BCN      JOHN
PROJ APEX END
```

To change rules interactively, choose Tools, Options, Autocost Rules.

Tracking interruptible activities Use the INTERRUPT record to track interruptible activities in your project. This report contains the following information: activity ID and description, early start and finish dates, late start and finish dates, interruptible early start and late finish dates, original and remaining durations, and interruptible early and late durations.

```
PROJ APEX INTERRUPT      JOHN
```

Listing data The following run stream assigns log information to activities:

```
PROJ APEX EXECUTE      JOHN
UPDATE YES YES
LIST AS100              1
LIST AS101              1 System design includes hardware and software
LIST AS101              2 components and their integration. A materials
LIST AS101              3 listing is also required.
LIST AS102              1 Final approval of design is necessary before
LIST AS102              2 proceeding.
LIST AS116              1 Programming includes minor revisions to existing
LIST AS116              2 software.
LIST AS116              3
LIST AS116              4
LIST AS150              1 Phase II of System Integration begins.
LIST AS200              1 Refer to Design specification #01270.
LIST AS200              2
```

LIST AS200	3
LIST AS200	4
LIST AS200	5
LIST AS204	1 Engineer required to submit technical spec
LIST AS204	2 drawings for temperature control equipment.
LIST AS204	4 Additional resource needed to complete this
LIST AS204	5 activity on-schedule. Approved change of
LIST AS204	6 time and a half increase over original budget.
RETURN	
PROJ APEX END	

Standard Records

In this chapter:

ACAT
 ACCESS
 ACTV
 ACTVR
 ADD
 ALIA
 BCAL
 BRT1
 BRT2
 CALENDAR
 CALENDAR LIST
 CDEF
 CDI
 CHDR
 CODE
 COPY AND RENAME
 COTL
 CURV
 CUSD
 DATE
 DRT1
 DRT2
 END

ESTABLISH TARGET
 ETC
 EXECUTE
 GENERATE (command)
 GENERATE (record)
 INPUT
 INTERRUPT
 LIST
 LIST STATISTICS
 MCAL - hourly
 MCAL - daily
 MCAL - weekly and monthly
 MHOL
 PCAL
 PERIOD CLOSEOUT
 PREC
 PRED
 PROJ
 RATE
 RCAL
 RHOL
 REMOVE
 RESR
 RETL
 RETURN

RLIM
 SNUM
 RULES
 SUCC
 TITLE DATA
 TITLE LIST
 UPDATE
 WBSA
 WBSD
 WBST
 BATCH ERROR
 MESSAGES

Standard records can be used to perform many of the functions available in the interactive program's dialog boxes, from adding a new project to building project dictionaries. This chapter lists the standard records in alphabetical order.

ACAT

Resource leveling and resource/cost control use resource and/or cost codes. The Resource Dictionary contains the following information:

- Descriptive titles of cost accounts and resources
- Units of measure for each resource
- Cost account categories such as labor, material, and equipment
- Resource availability limits for use during resource leveling. The limits can vary through six periods over time.
- Resource cost rates. P3 uses unit prices per resource quantity to calculate costs to complete; these rates can vary through six periods over time.

Use the ACAT record to specify cost account categories. Specify up to 26 cost account categories (A-Z) per project. Define up to six categories per ACAT record; add as many ACAT records as necessary.

Field Name:	Record	Del.	Category 1		Category 2		Category 3		Category 4		Category 5		Category 6	
	Type		Code	Title	Code	Title	Code	Title	Code	Title	Code	Title	Code	Title
Columns:	1-4	5	6	8-15	17	19-26	28	30-37	39	41-48	50	52-59	61	63-70
Example:	ACAT		L	LABOR	M	MATERIAL	E	EQUIPMNT						

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	ACAT
Delete	5	A	--	Normally blank D to delete all category titles

Field Name	Columns	Contents	Justification	Valid Data
Category Code	6 17 28 39 50 61	A	--	Any value. For example, M for material, L for labor, or E for equipment
Title	8-15 19-26 30-37 41-48 52-59 63-70	A/N	L	Any description

ACCESS

The ACCESS record generates a list of all users in a project and their level of access rights.

<i>Field Name:</i>	Record Type	ProjectName	CommandData	Suppress User List	Return Code	AccessLevel	Username	OutputDevice
<i>Columns:</i>	1-4	6-9	11-16	19	20	21	51-58	75-139
<i>Example:</i>	PROJ	APEX	ACCESS				JOHN	PRINTN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Any four-character project name, or ????
Command Data	11-16	A	L	ACCESS
Suppress User List	19	A	L	N - Suppress list of users
Return Code	20	A	L	R - Display return code for user list
Access Level	21	A	L	R - Read-Only or Restricted W - Read-Write X - Exclusive Read-Write Blank - Check for existence of user in USERFIL.P3
Username	51-58	A/N	L	Valid username (of user processing the batch run)
Output Device	75-139	A/N	L	Any filename with or without extension; use PRINTN to send output to default printer, or leave blank to save output in P3.OUT

- In a multiuser (network) environment, a valid username is required in columns 51-58 of the first PROJ record in the run stream.

The following is a list of possible return codes from using the ACCESS record, followed by a sample Visual Basic code fragment for capturing return codes.

- 900 - User does not exist
- 901 - USERFIL.P3 does not exist
- 902 - Other users in project
- 903 - Could not find DIR record
- 904 - Could not open DIR file
- 905 - Single user system trying to access a
Multiuser project.
- 906 - Rights file does not exist.
- 907 - Project does not have an owner assigned.
- 908 - No rights exist for user for the project
- 909 - User can not be downgraded from RW to RO.
- 910 - Insufficient access rights
- 911 - Project exclusively locked by another user.
- 1000+ - Number of users in the current project.

Sample Visual Basic Code Fragment for Capturing Return Codes

```
'// The following requires MSGBLAST.VBX. This is available free from Microsoft.
```

```
'// Setup Message Blaster
```

```
MsgBlaster1.hWndTarget = Me.hWnd
```

```
MsgBlaster1.MsgList(0) = WM_USER + 300
```

```
'// Batch File Name
```

```
BatchFile = "C:\P3WIN\BATCH.INP"
```

```
'// Location of the project
```

```
ProjectDirectory = "C:\P3WIN\PROJECTS"

'// Project Extension
ProjectExtension = "P3"

BatchTask% = Shell("PRMBATCH.EXE REPORTS " & BatchFile & " " & Str(Me.hWnd) & " " &
Str(WM_USER + 300) & ProjectDirectory & " /EXTENSION=" & ProjectExtension, 7)

Do
    DoEvents
Loop Until GetModuleUsage(BatchTask%) = 0
Sub MsgBlaster1_Message (msgval As Integer, wParam As Integer, lParam As Long, ReTurnVal
    As Long)
    If msgval = (WM_USER + 300) Then
        MsgBox "Batch return code " & Str(wParam)

    End If

End Sub
```

ACTV

The ACTV record lets you add, delete, or change activities in a project. Specify information for each activity, such as duration, percent complete, description, user-imposed schedule constraints, activity type, leveling type, and so on.

Alphanumeric Activity IDs containing fewer than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project records.

Field Name:	Record Type	Input Type	Activity ID	Dur. Type	Activity Duration	Percent Complete	ActivityTitle	Date Type	Imposed Date/Time	Cal. ID	Frac. % Complete	Longest Path Flag	Activity Type	Leveling Type
Columns:	1-4	5	6-15	16	17-20	21-23	24-71	72-73	74-85	86	87-91	92	93	94
Example:	ACTV	A	AS280	O	20		TEST SOFTWARE			1				

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	ACTV
Input Type	5	A	--	A to add, D to delete, C to change activity data. If blank, A is assumed following INPUT, C is assumed following UPDATE
Activity ID	6-15	A/N	--	Any value up to 10 alphanumeric characters
Duration Type	16	A	--	O for original duration, C or R for current (remaining) duration
Duration	17-20	N	R	0-9999 work units: days, weeks, or months
Percent Complete	21-23	N	R	0-100
Activity Title	24-71	A/N	L	Any value

Field Name	Columns	Contents	Justification	Valid Data
Date Type	72-73	A	L	AS - actual start AF - actual finish ES - start no earlier than EF - finish no earlier than FF - finish flag FM - finish milestone LS - start no later than LF - finish no later than MS - mandatory start MF - mandatory finish ON - start on SF - start flag SM - start milestone XF - expected finish ZTF - zero total float ZFF - zero free float or blank
Imposed Date	74-80	A/N	L	Imposed date in DDMMYY format or "DELETE" to remove imposed date
Time	81-85	A/N	L	Time in HH:MM format
Calendar ID	86	A/N	--	Calendar ID: 1-9 or A-Z (excluding I, O, V, and W)
Fractional Percent Complete	87-91	N	R	0.0 - 100.0
Longest Path Flag	92	A	--	Blank for noncritical; C for critical; D for delete

Field Name	Columns	Contents	Justification	Valid Data
Activity Type	93	N	--	0 - Task 1 - Independent 2 - Meeting 3 - Start Milestone 4 - Finish Milestone 5 - Hammock 6 - WBS 7 - Topic 8 - Start Flag 9 - Finish Flag
Leveling Type	94	N	--	0 - Normal 1 - Immediate Priority 2 - Split 3 - Stretch 4 - Crunch 5 - Stretch & Crunch

Comments

- ACTV records follow an INPUT or UPDATE record.
- To indicate both actual start and finish dates, use an ACTV record for each.
- To indicate both start and finish constraints, use an ACTV record for each.
- Activity ID fields defined in the CDEF record refer to the 10-character activity ID string in columns 6-15.
- Data entered in column 92 are overwritten when you schedule or level the project.
- This record contains two percentage fields: columns 21-23 and 87-91. To record a percentage with decimal places, use the Fractional Percent Complete field; if you record percentages in both fields, P3 uses the latter by default.
- The Task activity type is compatible with the Normal, Immediate Priority, and Split leveling types. The Independent activity type is compatible with all leveling types. All other types of activity ignore the Leveling Type field.

ACTVR

The ACTVR record rennumbers activities. The existing ID is deleted, the new ID is added, and the predecessors/successors are adjusted accordingly.

<i>Field Name:</i>	Record Type	Input Type	Current ID	New ID
<i>Columns:</i>	1-4	5	6-15	19-28
<i>Example:</i>	ACTV	R	A100	D101

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	ACTV
Input Type	5	A	--	R to renumber
Current ID	6-15	A/N	--	Current Activity ID
New ID	19-28	A/N	--	New Activity ID

Comments

- ACTVR records follow an INPUT or UPDATE record.
- If you attempt to assign a new activity ID that already exists, P3 ignores the ID and prints an error message.

ADD

The ADD command is used with the CALENDAR command and the PCAL and MCAL records to create a new project.

Field Name:	Record Type	Project Name	Command	Username	Decimal Display
Columns:	1-4	6-9	11-13	51-58	64
Example:	PROJ	APEX	ADD	JOHN	Ø

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of new project; no blank characters permitted
Command	11-13	A	--	ADD
Username	51-58	A/N	L	Valid username
Decimal Display	64	A/N	--	0 to display resource and cost data with zero decimal places; 2 or any character to display data with two decimal places

Comments

- In a multiuser (network) environment, a valid username is required in columns 51-58 of the first PROJ record in the run stream.
- If you attempt to add a project group with a name that already exists in your PROJ directory, P3 rejects the name and prints an error message.
- The ADD command must be followed by the CALENDAR command and PCAL and MCAL records that define the following calendar data:
Project group start date

Project group completion date
Start and end workperiods
Duration specified in hours, days, weeks, or months
Calendar start date
Nonworkperiods and exceptions
Project group data date

- Error conditions**
- Project name already exists
 - Error in PROJ record

ALIA

Once you define activity code and activity ID fields, use the ALIA record to define aliases for these fields. Combinations of up to five code fields can also be titled, or up to four if the combination includes activity ID codes.

Field Name:	Record	Input	Code Field Identifier					Alias	Alias
	Type	Type	1	2	3	4	5	Name	Title
Columns:	1-4	5	6-8	9-11	12-14	15-17	18-20	22-25	27-74
Example:	ALIA		C01	C02				DCAA	PHASE AND RESP

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	ALIA
Input Type	5	A	--	Normally blank; D to delete all alias values for this project
Code Field Identifiers	6-8 9-11 12-14 15-17 18-20	A/N	--	Code field identifier; for activity ID fields use A01-A04; for activity code fields use C01-C20
Alias Name	22-25	A/N	--	Alias code name
Alias Title	27-74	A/N	--	Description (title) of the alias

Comments

- ALIA records normally follow CDEF records.
- You cannot combine activity ID fields and activity code fields (for example, A01C01).

BCAL

Each project within a project group has its own data date. The BCAL record, which appears in the Title Data section of the batch file, stores this date. The BCAL record follows the project's COTL record, which identifies the project within the group.

<i>Field Name:</i>	Record Type	Project Data Date	Imposed Finish Date
<i>Columns:</i>	1-4	6-17	36-47
<i>Example:</i>	BCAL	15OCT96	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	BCAL
Project Data Date	6-18	A/N	--	DDMMYY HH:MM
Imposed Finish Date	34-46	A/N	--	DDMMYY HH:MM

* MM is 01-12 for month of year and YY is 70-99 for years in the 20th century (1970-1999) and 00-69 for years in the 21st century (2000-2069).

BRT1

The BRT1 record records title information for a project within a project group. The record appears in the Title Data section of the batch file, following the project's COTL record.

<i>Field Name:</i>	<i>Record Type</i>	<i>Company Name</i>	<i>Project Title</i>
<i>Columns:</i>	1-4	6-41	45-80
<i>Example:</i>	BRT1		

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A/N	--	BRT1
Company Name	6-41	A/N	--	Any value
Project Title	45-80	A/N	--	Any value

BRT2

The BRT2 record carries report title information for a project within a project group. The record appears in the Title Data section of the batch file, following the project's COTL record.

<i>Field Name:</i>	Record Type	Report Center Heading	Project Number/Version
<i>Columns:</i>	1-4	14-61	62-77
<i>Example:</i>	BRT2		

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A/N	--	BRT2
Report Center Heading	14-61	A/N	--	Any value
Project Number/Version	62-77	A/N	--	Any value

CALENDAR

Use the CALENDAR command to define project calendar data such as the project planning unit and holidays.

Field Name:	Record Type	Project Name	Command	Planning Unit	Shifts Per Day	Start Time 1st Shift	Shift Duration	Week Starts On	Holiday	Username
Columns:	1-4	6-9	11-18	19	21	23-27	29-33	35-37	39	51-58
Example:	PROJ	APEX	CALENDAR	D				MON	Y	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-18	A	--	CALENDAR
Planning Unit	19	A	--	H - hour; D - day; W - week; M - month
Shifts Per Day	21	N	--	1-6
Start Time First Shift	23-27	A/N	--	Start time of first shift in HH:MM format
Shift Duration	29-33	A/N	--	Standard duration of each shift in HH:MM format; the product of shifts per day and shift duration cannot exceed 24 hours
Week Starts On	35-37	A	--	Day of week: MON, TUE, WED, THU, FRI, SAT, SUN; default is MON
Holiday	39	A	--	Y or blank to move holiday to nearest workday; N to leave holiday date unchanged
Username	51-58	A/N	L	Valid username

Comments

- The CALENDAR command is followed by PCAL, MCAL, and MHOL records that define the following calendar data:
 - Project group start date
 - Project group completion date
 - Start and end workperiods
 - Calendar start date
 - Nonworkperiods and exceptions
 - Project group data date
- You can establish the planning unit (column 19) only once for each project group. Once you define the planning unit, you can change it only by copying and renaming the project group. (In P3, choose Tools, Project Utilities, Copy).
- The Week Starts On field (columns 35-37) determines the start of the workweek in weekly projects. For projects with a planning unit of hour or day, this value is used for reporting. The start day of the workweek has no effect on a monthly project.
- Use the Holiday field (column 39) to specify whether to move a holiday or a specially designated nonworkday that falls on a regularly scheduled nonworkday (weekend) to the nearest workday. This field pertains only to daily projects.

Error conditions

- Error in PROJ record
- Nonexistent project name
- Invalid start day of the week
- Holiday date format error

CALENDAR LIST

Once you define a calendar for a project, use the CALENDAR LIST command in a PROJ record to print the project calendar(s). The report indicates which timeperiods are workperiods and which timeperiods are nonworkperiods.

<i>Field Name:</i>	Record Type	Project Name	Command	Username	Start Date	End Date
<i>Columns:</i>	1-4	6-9	11-23	51-58	66-69	70-73
<i>Example:</i>	PROJ	APEX	CALENDAR LIST	JOHN	1196	0897

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-23	A	--	CALENDAR LIST prints project calendars
Username	51-58	A/N	L	Valid username
Start Date	66-69	N	R	Start month and year of calendar to be printed
End Date	70-73	N	R	Last month and year of calendar to be printed.* If end date is left blank, entire calendar is printed.

* MM is 01-12 for month of year and YY is 70-99 for years in the 20th century (1970-1999) and 00-69 for years in the 21st century (2000-2999).

Comments

- A PROJ record with the END command must follow the CALENDAR LIST command.
- You must establish at least one calendar using the MCAL record before you can use the CALENDAR LIST command.
- Always specify the last month and/or year of the calendar to be printed.

CDEF

An activity coding structure can use up to 10 characters of the activity ID string for activity ID fields and up to 64 characters of the activity code string for activity code fields. Individual activity ID or code fields are identified within the activity ID and activity code string. Titles can be assigned to codes and combinations of codes.

Use the code field definition (CDEF) record to establish the type of code field (activity code or activity ID), the location of the field in the activity ID or code string, and the name and description of the field. Each CDEF record defines a single code field.

<i>Field Name:</i>	Record Type	Del.	Field Type	Field No.	End Position	Name	Description
<i>Columns:</i>	1-4	5	6-9	11-12	14-15	17-20	22-69
<i>Example:</i>	CDEF		CODE	1	3	DEPT	DEPARTMENT

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	CDEF
Delete	5	A	--	Normally blank; D to delete this definition*
Field Type	6-9	A	L	CODE or ACT
Field Number	11-12	N	R	Order number of code or activity of fields defined: 1-4 for ACT fields, 1-20 for CODE fields
End Position	14-15	N	R	End position of field in ACTV record (columns 6-15) or CODE record(columns 17-80): 1-10 for ACT records, 1-64 for CODE records
Name	17-20	A/N	L	Any value

Field Name	Columns	Contents	Justification	Valid Data
------------	---------	----------	---------------	------------

Description	22-69	A/N	L	Any value
-------------	-------	-----	---	-----------

* Specify CODE in columns 6-9 to delete a previously defined activity code field; specify ACT to delete a previously defined activity ID field.

Comments

- Code field definitions appear in the Activity Codes Dictionary in P3.
- You must define codes before you can organize, select, or summarize the project.
- Define up to 20 activity code fields and up to four activity ID fields.
- Activity ID fields refer to the 10-character activity ID string in columns 6-15 of the ACTV record.
- The CDEF record is normally followed by COTL records to define code values and titles.

CDI

The CDI record assigns data to user-defined data items, activities, or resources. The Name and Data fields (columns 37-40 and 44-63) must be predefined through the CUSD record.

<i>Field Name:</i>	Record Type	Activity ID	Resource	Cost Account	Res. Des.	Name	Input Type	Data
<i>Columns:</i>	1-3	5-14	15-22	23-34	35	37-40	42	44-63
<i>Example:</i>	CDI	MP001				PLST		15JAN9713:00

Field Name Columns Contents Justification Valid Data

Record Type	1-3	A	--	CDI
Activity ID	5-14	A/N	--	Up to 10-character value per ACTV record
Resource	15-22	A/N	L	Blank if entering data for activity; if resource, specify the resource name
Cost Account	23-34	A/N	L	Blank if entering data for an activity custom data item; if a resource custom data item, specify the cost account number (optional)
Resource Designator	35	A/N	--	Blank or resource designator
Name	37-40	A/N	L	Name of custom data item
Input Type	42	A	--	D to delete; blank to add
Data	44-63	A/N	L	For Date items specify start date (S) or finish date (F) in DDMMYY HH:MM format; for Character items (C) specify up to 20 characters; for Numeric items (N) specify 1-10 digits; for Precision numeric items (P) specify 4-11 digits

Comments

- Activities referenced by the activity ID must exist, or ACTV records must precede the CDI record.
- The resource name, cost account number, and resource designator must be defined before you can process CDI records.

CHDR

Use the CHDR record to change the PROJ path without terminating a run stream. This enables you to work with projects located in several locations in the same run stream.

<i>Field Name:</i>	Record Type	Change Path To
<i>Columns:</i>	1-4	6-70
	CHDR	C:\P3\PROJECTS

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	CHDR
Change Path To	6-70	A/N	--	Drive and directory where project is located

Example The following run stream adds custom data item codes to projects APEX and CNCT, located in different directories.

```

PROJ APEX TITLE DATA                                JOHN
CUSDA  PLSTS07Planned Start    PLFNF07Planned Finish
CUSDA  PARTC20Part Number      INSPC20Inspector
CUSDR  ORBCP090rig Budget Cost  ORBQP090rig Budget Qty
CHDR C:\P3WIN\NEWPROJ
RETURN
PROJ CNCT TITLE DATA                                JOHN
CUSDA  PLSTS13Planned Start    PLFNF13Planned Finish
CUSDA  PARTC20Part Number      INSPC20Inspector
CUSDR  ORBCP100rig Budget Cost  ORBQP100rig Budget Qty
RETURN
PROJ CNCT END

```

CODE

Use the CODE record to assign activity codes to an activity.

Field Name:	Record Type	Input Type	Activity ID	Code Values
Columns:	1-4	5	6-15	17-80
Example:	CODE		A100	ENGMASON1

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	L	CODE
Input Type	5	A	--	Normally blank; D to delete all code assignments for this activity
Activity ID	6-15	A/N	--	
Code Values	17-80	A/N	L	Code data must correspond with code field definition (see CDEF record)

Comments

- Type asterisks (*) rather than blanks in place of any code values that you do not want to change. For example, to change the code string INSPECMACH to INSPECBOIL, type *****BOIL in the Code Values field.



Blanks in the 64-character string overwrite existing data.

- Only one CODE record is permitted per activity.
- The activity referenced by the activity ID must exist, or ACTV records must precede the CODE record.

- Activity IDs with fewer than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project for all ACTV, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records.
- Modify codes by reprocessing the record.

COPY AND RENAME

Use the COPY AND RENAME command to make a copy of an existing project. You can then perform "what-if" analyses on the duplicate project to examine alternative resource and scheduling scenarios.

<i>Field Name:</i>	Record Type	Project Name	Command	New Name	User-name
<i>Columns:</i>	1-4	6-9	11-25	27-30	51-58
<i>Example:</i>	PROJ	APEX	COPY AND RENAME	AUTO	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-25	A	--	COPY AND RENAME
New Name	27-30	A	--	Four-character name for new project
Username	51-58	A/N	L	Valid username

Error conditions

- Unable to allocate space for project, or not enough memory to copy files
- Nonexistent project to be copied

COTL

Code titles print automatically on schedule reports when combined with the Skip Page, Skip Lines, and Summarize On Codes report options.

Once you define activity code and activity ID fields, use the COTL record to specify code titles for these fields. Combinations of up to five code fields can also be titled. You can also use the COTL record to add a project to a project group, or to delete a project from a group.

Field Name:	Record Type	Del.	Specified Code Fields					Code Value	Code Title	Order
			1st	2nd	3rd	4th	5th			
Columns:	1-4	5	6-8	9-11	12-14	15-17	18-20	22-31	33-80	81-83
Example:	COTL		C01				Code Value	ENG	ENGINEERING DEPARTMENT	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	COTL
Delete	5	A	--	Normally blank; D to delete all code titles
Specified Code Fields	6-8 9-11 12-14 15-17 18-20	A/N	--	Code field identifier; for activity ID fields use A01-A04; for activity code fields use C01-C20. To add a project to a project group, specify SUB in columns 6-8; to delete an existing project, specify SD in columns 6-8. Add or delete the project's SUBP code field value using the A01 field.
Code Value	22-31	A/N	R	Actual code value(s). If adding a project, specify its four-character project name in columns 22-25 and its two-character Project ID in columns 27-28.
Code Title	33-80	A/N	L	Title of code value; DELETE removes the existing specified code value and code title

Field Name	Columns	Contents	Justification	Valid Data
Order	81-83	N	R	If blank, sorted alphabetically; if 1-255, specified number is primary sort

Comments

- When right-justifying the code value in columns 22-31, trailing spaces are significant. For example, in the case of a 3-character code value in a 5-character code field, type the three characters in columns 27-29.
- COTL records normally follow the CDEF record.

The following example illustrates an activity ID code field title:

Record Type	Code Field	Code Value	Code Title
COTL	A01	C	CONVEYOR SYSTEM

If an activity's ID contains a C in Activity ID field 1 (the first defined character in the activity ID string), the activity is part of the Conveyor System.

The following example shows a single activity code title record:

Record Type	Code Field	Code Value	Code Title
COTL	C01	PCH	PURCHASING DEPARTMENT

If an activity carries PCH in Activity Code field 01, the activity is part of the purchasing department.

The following example defines a code combination:

Record Type	Code Field Combination	Combination Code Value	Code Title
COTL	C01C02	1ACME	RESPONSIBILITY OF ACME MOTORS

In this example, Activity Code field 1 (C01) represents the phase of the project. A “1” in this field denotes the Design and Procurement phase. ACME in Activity Code field 2 (C02, Responsibility) means that ACME motors is responsible for that activity. The combination of the two codes, C01C02, is assigned the title "Responsibility of ACME Motors". You cannot combine Activity ID fields and Activity Code fields (for example, A01C01).

CURV

P3 distributes resource usage and costs evenly across an activity unless you specify nonlinear distribution using curves. Use the CURV record to assign a cumulative resource percent complete at each 10% increment of resource duration. Since each number is cumulative, each value must be equal to or greater than the value from the previous period, and the last value must be 100.

Field Name:	Record Type	Input Type	Res. Des.	Description	Percent of Duration		
					0%	10%	20%
Columns:	1-4	5	6	8-27	29-31	33-35	37-39
Example:	CURV		8	BACKLOADED	0	2	5

Percent of Duration							
30%	40%	50%	60%	70%	80%	90%	100%
41-43	45-47	49-51	53-55	57-59	61-63	65-67	69-71
11	18	27	38	51	65	82	100

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	CURV
Input Type	5	A	--	Normally blank; D to delete assignment specified by resource designator
Resource Designator	6	A/N	--	0-9 or A-F
Description	8-27	A/N	L	Any value

Field Name	Columns	Contents	Justification	Valid Data
Percent of Duration	29-31	N	L or R	0 - 100, whole numbers only
	33-35			
	37-39			
	41-43			
	45-47			
	49-51			
	53-55			
	57-59			
	61-63			
	65-67			
	69-71			

CUSD

Use the CUSD (custom data definition) record to define additional fields by activity or resource assignment.

Field Name:	Record Type	Input Type	Field 1					Field 2				
			Input	Name	Type	Length	Description	Input	Name	Type	Length	Description
Columns:	1-4	5	7	8-11	12	13-14	15-30	32	33-36	37	38-39	40-55
Example:	CUSD	A		PLST	S	13	PLANNED START		PLFN	F	13	PLANNED FINISH

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	CUSD
Input Type	5	A	--	A for activity; R for resource; D to delete all CUSD records
Fields 1 and 2 - Input	7	A		Blank to add data field D to delete field
- Name	8-11 33-36	A/N	L	Specify the name of the custom data item
- CUSD Type	12 37	A	--	Classify CUSD type: S for start date; F for finish date; N for number; P for precision numeric; C for character
- Length	13-14 38-39	N	R	1-20 for character; 1-10 for number; 1-11 for precision numeric; 7 or 13 for dates
- Description	15-30 40-55	A/N	L	Any value

Comments

- The CUSD record must follow an EXECUTE command.
- The maximum number of fields is two per CUSD record. The total maximum number of fields per run stream is eight for both activity custom data items and resource custom data items.
- If you place a D in column 5, all custom data items are deleted. You cannot differentiate between activity and resource custom data items.

DATE

The DATE record temporarily overwrites the calculated dates for an activity. Use this record with caution.

Field Name:	Record	Activity ID	Early Start		Early Finish		Late Start		Late Finish		Suspend		Resume	
	Type		Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
Columns:	1-4	6-15	17-23	25-29	32-38	40-44	47-53	55-59	62-68	70-74	77-83	85-89	92-98	100-104
Example:	DATE	A1Ø3	Ø3NOV97		Ø4DEC97		Ø7NOV97		Ø6DEC97					

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	DATE
Activity ID	6-15	A/N	--	Use up to 10 alphanumeric characters
Early Start - Date	17-23	A/N	L	Imposed early start date in DDMMYY format
- Time	25-29	A/N	L	Time of day in HH:MM format
Early Finish - Date	32-38	A/N	L	Imposed early finish date in DDMMYY format
- Time	40-44	A/N	L	Time of day in HH:MM format
Late Start - Date	47-53	A/N	L	Imposed late start in DDMMYY format
- Time	55-59	A/N	L	Time of day in HH:MM format
Late Finish - Date	62-68	A/N	L	Imposed late finish date in DDMMYY format
- Time	70-74	A/N	L	Time of day in HH:MM format
Suspend - Date	77-83	A/N	L	Imposed suspend date in DDMMYY format; D to delete this date

Field Name	Columns	Contents	Justification	Valid Data
- Time	85-89	A/N	L	Time of day in HH:MM format
Resume - Date	92-98	A/N	L	Imposed resume date in DDMMYY format; D to delete this date
- Time	100-104	A/N	L	Time of day in HH:MM format

Comments

- No other calculated data, such as float or driving relationships, recognize these imposed dates.
- When you schedule or level a project, P3 overwrites both the early start and finish dates and the late start and finish dates.
- When they are generated using the DATE record, start flags and start milestones show finish dates in addition to their start dates; finish flags and finish milestones show start dates in addition to their finish dates.
- If you specify a resume date, a suspend date is required. The resume date must be later than the suspend date.

DRT1

Use the DRT1 record to specify the company name and project title in your project.

<i>Field Name:</i>	Record Type	Company Name	Project Title
<i>Columns:</i>	1-4	6-41	45-80
<i>Example:</i>	DRT1	ACME MOTORS	PLANT EXPANSION AND MODERNIZATION

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	DRT1
Company Name	6-41	A/N	L	Any value
Project Title	45-80	A/N	L	Any value

DRT2

Use the DRT2 record to change the report center heading for reports and graphics.

<i>Field Name:</i>	Record Type	Report Title	Project Version
<i>Columns:</i>	1-4	14-61	62-77
<i>Example:</i>	DRT2	PROJECT SCHEDULE	P3WIN Version 3.0

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	DRT2
Report Title	14-61	A/N	L	Any value
Project Version	62-77	A/N	L	Any value

END

The END command terminates the batch file. Only one END command can appear in each file. The Batch system ignores any data following this command.

<i>Field Name:</i>	Record Type	Project Name	Command
<i>Columns:</i>	1-4	6-9	11-13
<i>Example:</i>	PROJ	APEX	END

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character project name
Command	11-13	A	--	END

ESTABLISH TARGET

The ESTABLISH TARGET command creates a new target schedule. Create up to two targets containing schedule, resource, and cost data.

<i>Field Name:</i>	Record Type	Project Name	Command	Target Name	User-name
<i>Columns:</i>	1-4	6-9	11-37	39-42	51-58
<i>Example:</i>	PROJ	APEX	ESTABLISH TARGET SCHEDULE-1	PLAN	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-37	A/N	--	ESTABLISH TARGET SCHEDULE-n where n specifies Target 1 or Target 2
Target Project Name	39-42	A/N	--	Four-character name of target project
Username	51-58	A/N	L	Valid username

Comments

- The ESTABLISH TARGET command must be followed by an END command.
- Specify either Target 1 or 2 in column 37.

ETC

The ETC command recalculates the estimated quantity at completion (EAC) and the estimated quantity to complete (ETC) based on progress. Progress is determined by the resource percent complete (RPC) or activity percent complete (PCT), and the actual to date quantity (TDQ). If the resource percent complete is blank, P3 uses the activity percent complete. The batch processor uses the following formulas to calculate estimate to complete (ETC):

$$EAC = (TDQ \div RPC) \times 100 \quad \text{or} \quad EAC = (TDQ \div PCT) \times 100, \text{ if the RPC is blank}$$

$$ETC = EAC - TDQ$$

Before using this command, set both parts of Autocost Rule 5 to N so that P3 does not calculate actual cost and quantity to date. For activities with progress, specify actual cost and quantity to date, as well as resource percent complete.

<i>Field Name:</i>	Record Type	Project Name	Command	Produce Audit Report	Username
<i>Columns:</i>	1-4	6-9	11-37	20-22	51-58
<i>Example:</i>	PROJ	APEX	ETC	REP	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Produce Audit Report	20-22	A	--	REP
Username	51-58	A/N	L	Valid username
Audit Filename	75-139	A	L	Audit report filename

Comments ■ The ETC command recalculates ETC for all activities in the network.

EXECUTE

The EXECUTE command instructs the P3 Batch system to process specific activity data.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-17	51-58
<i>Example:</i>	PROJ	APEX	EXECUTE	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-17	A	--	EXECUTE
Username	51-58	A/N	L	Valid username

- Comments**
- The EXECUTE command must be followed by an INPUT, UPDATE, or REPORT record. The last record of the EXECUTE run stream must be RETURN.

GENERATE (command)

Use the GENERATE command to create ANSI text batch records for all existing calendar, title, resource, activity, and code records in your project. You might also use it to create templates for frequently used projects. GENERATE lets you write specified batch records to a new input data file. You can then use a text editor to revise the data and create a new project or update an existing project.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-18	51-58
<i>Example:</i>	PROJ	APEX	GENERATE	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-18	A	--	GENERATE
Username	51-58	A/N	L	Valid username

- Comments**
- The GENERATE command must be followed by one or more GENERATE records to specify output and options.

GENERATE (record)

Use the GENERATE record to specify different types of output and file options. These selections are listed under the Output and Options headings that follow this record layout description.

Field Name:	Record Type	Output	Options		
			Name	From Sort	Into Filename
Columns:	1-8	10-14	16-19	21-29	31-94
Example:	GENERATE	ALL	CAR5	FROM SORT	INTO C:\P3WIN\P3OUT\SAMPLE.TXT

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-8	A	--	GENERATE
Output	10-14	A	L	Type of record to output into the generated file
Options - Name	16-19	A/N	--	Four-character name of new project to be created with run stream produced by GENERATE ALL
- From Sort	21-29	A	L	FROM SORT Select from current filter file
- Into	31-34	A	L	INTO
- Filename	36-94	A	L	Path and filename for the generated file

- Output**
- In order to use the FROM SORT option, be sure that the following section and entry appear in the P3.INI file:
 [Options]
 CreateSrtWithFlt=1

- The output contains records of the type specified. Note that these records are generated in the order in which you specify them. This order is important if you plan to use the generated records as input to another batch run, as P3 will not process certain records if they are out of sequence. The following record types are listed in the correct order:

CDEF generates CDEF records of activity ID and activity code field definitions.

COTL generates COTL records of activity ID and activity code field titles.

DRT generates DRT1 and DRT2 records of project title information.

RETL generates RETL records of resources and cost accounts and titles.

ACAT generates ACAT records for all cost account category titles.

RLIM generates RLIM records for resource limits and through dates.

RATE generates RATE records for resource prices per unit and through dates.

CUSD generates CUSD records with data definitions for activities and resources.

CDI generates CDI records with data assignments to activities or resources.

CURV generates CURV records for nonlinear distribution of resources.

ALI generates ALIAS records of alias code field definitions.

ACTV generates ACTV records of activity data including activity ID, original duration, percent complete, and activity title. If A, C, or D follows ACTV, the letter is added to the output record. Use this feature to add, change, or delete activities.

ACTVR generates ACTVR records of activity IDs.

CODES generates CODE records for all activity code assignments to activities.

PREC generates PREC records for all precedence relationships among the various activities in terms of successor activities for each activity (same as SUCC).

SUCC generates SUCC records for all precedence relationships among the various activities in terms of successor activities for each activity (same as PREC).

PRED generates PRED records for all precedence relationships among the various activities in terms of predecessor activities for each activity.

CONST generates ACTV records for all activities with user-imposed schedule constraints.

DATE generates DATE records including early start/finish, late start/finish, and suspend/resume dates and times for all activities.

RESR generates RESR records for all activities with resources, resource quantities, and cost accounts.

COST generates RESR records for all activities with resources, cost accounts, and cost amounts.

LOGnn generates LIST records for all activities with data in the log file. The nn represents the line number (1-99) in the log. If nn is omitted, P3 generates all log lines.

PROG generates ACTV progress records including activity number, remaining duration, percent complete, and actual start and finish dates for activities with progress.

WBSD generates WBS Dictionary information for a project.

WBS generates WBS assignments for all activities.

ADD generates calendar information, Autocost rules, and title data for a project. You can use this output file to add other projects through the P3 Batch system.

ALL generates batch records for the output types described (except ACTVR), in the appropriate order for input to the P3 Batch system. This record also generates the required PROJ, INPUT, and RETURN records; the END record at the end of the generated file; and blank lines between groups of records for readability. The project name appears in these records as four question marks (????) unless you specify a new project name. Use columns 16-19 to specify a project name in the generated input file.



To generate Primavera Version 4.1 (for DOS) project data output, type a 4 in column 13, immediately after the ALL specification.

CUSD generates CUSD records with data definitions for activities and resources.

CDI generates CDI records with data assignments to activities or resources.

CURV generates CURV records for nonlinear distribution of resources.

Options

- New project name (columns 16-19)

Specify a new project name for the generated data file created with the GENERATE ALL record. Do not specify a new project name for any other GENERATE record.

- **FROM SORT** (columns 21-29)

FROM SORT generates batch records of the types specified, from the most recent filter file. If you omit FROM SORT, P3 uses all activities to generate batch records.

- **INTO** [filename] (columns 31-94)

INTO [filename] names the data file that contains the processed records. If omitted, the data file is named GEN.OUT, and is stored in the USERLOC directory. If you generate more than one record type into the same output file, all output is concatenated; no data is lost. Alternatively, you may use the INTO option to send data for multiple records to different files.

Comments

- The GENERATE record must be preceded by the PROJ record with the GENERATE command. Refer to the sample run stream for Generating an Input File at the beginning of this chapter for more details.
- The END command must be the last record in this batch file.

INPUT

Use the INPUT or UPDATE record to add or change activity data. The very first run after adding a new project must use the INPUT record. All subsequent runs require the UPDATE record. If you specify INPUT for a project that already contains activity information and you execute the batch job, the batch program prompts you to either overwrite the existing data with the new data or terminate the batch run.

<i>Field Name:</i>	Record Type	Validate	Full List	Open End List
<i>Columns:</i>	1-6	8	9-11	13-15
<i>Example:</i>	UPDATE		NO	NO

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-6	A	L	INPUT or UPDATE
Validate	8	Blank or X		Normally blank; X suppresses normal data validation
Full List	9-11	A	L	YES to print complete list of all activity records in run stream; NO to print only a diagnostic list of project-level data and open-end list, if specified
Open End List	13-15	A	L	YES to print list of activities with no successors or predecessors; NO to print only a diagnostic list of project-level data and full list, if specified

Comments

- An INPUT or UPDATE record must follow a PROJ record with the EXECUTE command.
- An INPUT or UPDATE run stream must end with a RETURN record.
- Use the INPUT record only once to initiate a project; thereafter, use UPDATE.

- An INPUT or UPDATE record must precede any ACTV, PREC, SUCC, PRED, CODE, RESR, PERIOD CLOSEOUT, LIST, or DATE record.
- When using INPUT, the activities referenced by PREC, SUCC, and PRED records need not be defined with ACTV records first. These activities must, however, be defined somewhere within the same run stream.
- When using UPDATE, activities must already exist before they are referenced by PREC, SUCC, and PRED records. These activities can be defined in a previous run stream, earlier in the same run stream, or by using the activity detail forms.
- If you suppress validation, the program will not check for the existence of referenced activities, resources, or cost accounts. Relationships to non-existent activities will not be prevented.

Activity ID Field

The Activity ID field appears in the ACTV, ACTVR, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records. The position of data in this field is user-defined; however, it must be consistent with the P3 interactive system and among all batch records. The interactive system automatically right justifies activity IDs that contain all numeric characters. If the activity ID includes one or more letters, blank spaces, or special characters, P3 positions the data as they are entered. Activity IDs can use all 10 available characters.

How you choose to place data in the Activity ID field also affects the definition of code fields within the activity ID; the CDEF record references column positions within the available 10 characters relative to the first (left-most) column.

INTERRUPT

The INTERRUPT command has no effect on the project files. It prepares a report of interruptible activities—those activities affected if scheduled using the interruptible scheduling option. The report shows the activity ID and description; original, remaining, and interruptible durations; and the interruptible start, early start, and early finish dates. The interruptible duration represents the time in workperiods from the interruptible start to the constrained finish date.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-19	51-58
<i>Example:</i>	PROJ	APEX	INTERRUPT	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-19	A	--	INTERRUPT
Username	51-58	A/N	L	Valid username

LIST

The LIST record contains additional descriptive information about an activity. The P3 interface refers to these items as log records.

<i>Field Name:</i>	Record Type	Input Type	Activity ID	Mask	Rec. No.	Del.	Description	Del. All
<i>Columns:</i>	1-4	5	6-15	20	21-22	23	24-71	72
<i>Example:</i>	LIST		B300		6		BE SURE TO COMPLETE PUNCH LIST	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	LIST
Input Type	5	A	--	Normally blank; D to delete all LIST records for the activity
Activity ID	6-15	A/ N	--	Use a 10 character value for each ACTV record
Mask	20	A	--	Normally blank; M to mask record in printing
Record Number	21-22	N	R	1-99
Delete	23	A	--	Normally blank; D to delete LIST record
Description	24-71	A/N	L	Any value
Delete All	72	A	--	Normally blank; D to delete all LIST records in the project

Comments

- Use a maximum of 99 LIST records per activity.
- The activity referenced by the activity ID must exist, or ACTV records must precede the LIST record.
- Activity IDs can be justified to the right or left, but they must be consistent throughout the project for all records.
- To delete all LIST records for the entire project, specify only LIST in columns 1-4 and D in column 72.

LIST STATISTICS

The LIST STATISTICS command instructs the P3 Batch system to print statistics for the project.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-25	51-58
<i>Example:</i>	PROJ	APEX	LIST STATISTICS	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-25	A	--	LIST STATISTICS
Username	51-58	A/N	L	Valid username

Output

- This command produces a list that includes the project name, network type, data date, project start date, project completion date, code field definitions, activity field definitions, calendar information (including all holidays), and default report titles.

Error Conditions

- Error in PROJ record or nonexistent project name.

MCAL - Hourly

Use the MCAL record to specify the characteristics of calendar definitions. Calendar data must be defined before you can use any activity-level commands. The first three fields are the same for each planning unit; the remainder of the MCAL record depends on the planning unit selected. Each calendar must have a separate MCAL record.

Field Name:	Record Type	Cal. ID	Del.	Monday		Tuesday		Wednesday		Thursday	
				Start	End	Start	End	Start	End	Start	End
Columns:	1-4	6	7	15-19	21-25	27-31	33-37	39-43	45-49	51-55	57-61
Example:	MCAL	1		06:00	24:00	06:00	24:00	06:00	24:00	06:00	24:00

Friday		Saturday		Sunday		Calendar Title
Start	End	Start	End	Start	End	
63-67	69-73	75-79	81-85	87-91	93-97	99-114
06:00	24:00	06:00	24:00	06:00	24:00	TWO SHIFTS

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	MCAL
Calendar ID	6	A/N	--	Calendar ID - 1-9 or A-Z (excluding I, O, V, and W)
Delete	7	A	--	D to delete calendar
Monday to Sunday - Start Time	15-19 27-31 39-43 51-55 63-67 75-79 87-91	A/N		Start time in HH:MM format; specify 00:00 or blank spaces for days when work does not occur

Field Name	Columns	Contents	Justification	Valid Data
- End Time	21-25 33-37 45-49 57-61 69-73 81-85 93-97	A/N	L	End time in HH:MM format; specify 00:00 or blank spaces for days when work does not occur
Calendar Title	99-114	A/N	L	Any value

MCAL - Daily

Use the MCAL record to specify the characteristics of calendar definitions. Calendar data must be defined before you can use any activity-level commands. The first three fields are the same for each planning unit; the remainder of the MCAL record depends on the planning unit selected. Each calendar must have a separate MCAL record

<i>Field Name:</i>	Record Type	Cal. ID	Del.	Start Day	End Day	Calendar Title
<i>Columns:</i>	1-4	6	7	15-17	21-23	45-60
<i>Example:</i>	MCAL	1		MON	FRI	FIVE-DAY WEEK

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	MCAL
Calendar ID	6	A/N	--	Calendar ID: 1-9 or A-Z (excluding I, O, V, and W)
Delete	7	A	--	D to delete calendar
Start Day of Workweek	15-17	A	--	Day of week: MON, TUE, WED, THU, FRI, SAT, SUN
End Day of Workweek	21-23	A	--	Day of week: MON, TUE, WED, THU, FRI, SAT, SUN
Calendar Title	45-60	A/N	L	Any value

Comments

- The start and end days of the workweek determine when activities are scheduled. The Start Day field is not the same as the days of the week specified in columns 35-37 of the CALENDAR command, which is used for reporting purposes when the planning unit is any value other than week.

MCAL - Weekly and Monthly

Use the MCAL record to specify the characteristics of calendar definitions. Calendar data must be defined before you can use any activity-level commands. The first three fields are the same for each planning unit; the remainder of the MCAL record depends on the planning unit selected. Each calendar must have a separate MCAL record

<i>Field Name:</i>	Record Type	Cal. ID	Del.	Calendar Title
<i>Columns:</i>	1-4	6	7	45-60
<i>Example:</i>	MCAL	1		MONTHLY

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	MCAL
Calendar ID	6	A/N	--	Calendar ID - 1-9 or A-Z (excluding I, O, V, and W)
Delete	7	A	--	D to delete calendar
Calendar Title	45-60	A/N	--	Any value

Comments

- An MCAL record must follow the PCAL record when adding a project or changing a calendar.

MHOL

The MHOL record specifies the start and finish dates or times for calendar nonworkperiods and exceptions.

Field Name:	Record Type	Delete	Calendar ID	Holiday Delete	Non or Ex.	Start		End	
						Date	Time	Date	Time
Columns:	1-4	5	6	7	10	14-20	22-26	30-36	38-42
Example:	MHOL		1		H	23NOV97		24NOV97	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	MHOL
Delete	5	A	--	Normally blank; D to delete all exceptions and nonworkperiods in the project
Calendar ID	6	A/N	--	Calendar ID. Use 1-9 or A-Z (excluding I, O, V, and W). Specify an asterisk (*) to apply a nonworkperiod or exception to all calendars
Holiday Delete	7	A	--	Normally blank D to delete a single nonworkperiod or exception as defined by remainder of record
Nonwork-period or Exception	10	A	--	W to specify an exception (workperiod during what would otherwise be nonworktime); H to specify a nonworkperiod (holiday)
Start - Date	14-20	A/N	L	Start date for nonworkperiod/exception in DDMMYY format
- Time	22-26	A/N	L	Time of day in HH:MM format
End - Date	30-36	A/N	L	End date for nonworkperiod/exception in DDMMYY format

Field Name	Columns	Contents	Justification	Valid Data
- Time	38-42	A/N	L	Time of day in HH:MM format

Comments

- End date and time are not required if the start date and time make up the entire nonworkperiod or exception.
- Specify start and end times without their accompanying dates for nonworkperiods or exceptions that occur daily on hourly or shift calendars.
- Leave the year blank to specify an annual nonworkperiod or exception.
- Use two MHOL records to specify annual nonworkperiods or exceptions that span the end of one year and the start of the next (for example, from 25DEC to 05JAN). The first record defines the holiday or the exception to the end of the first year; the second defines the period from the beginning of the following year.

PCAL

The PCAL record establishes project group schedule information. Use PCAL with the ADD and CALENDAR commands when defining new projects and with the CALENDAR command when changing existing calendars.

Field Name:	Record	Data Date		Project Start Date		Project Compl. Date		Compl.Date	Calendar Start	Calendar Start	Start Date
	Type	Date	Time	Date	Time	Date	Time	Del.	Date	Time	Del.
Columns:	1-4	6-12	14-18	20-26	28-32	34-40	42-46	48	50-56	58-62	64
Example:	PCAL			24JUL96		30AUG97					

Latest Calculated Early Finish	
Date	Time
66-72	74-78

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PCAL
Data	6-12	A/N	L	Data date for schedule calculation in DDMMYY format
- Date				
- Time	14-18	A/N	L	Data date time of day in HH:MM format
Project Start	20-26	A/N	L	Project start date in DDMMYY format
- Date				
- Time	28-32	A/N	L	Project start time in HH:MM format
Project Completion	34-40	A/N	L	Project completion date in DDMMYY format
- Date				
- Time	42-46	A/N	L	Project completion time in HH:MM format
Completion Date	48	A	--	If D, delete project completion date; otherwise leave blank
Delete				

Field Name	Columns	Contents	Justification	Valid Data
Calendar Start - Date	50-56	A/N	L	If blank, uses calendar start date
- Time	58-62	A/N	L	Calendar start time in HH:MM format
Start Date Delete	64	A	--	D to delete calendar start date
Latest Calculated Early Finish - Date	66-72	A/N	L	Latest calculated early finish date in DDMMYY format
- Time	74-78	A/N	L	Latest calculated early finish time in HH:MM format

Comments

- The PCAL record must follow the CALENDAR command; MCAL records must follow the PCAL record when you add a project or change a calendar.
- You must specify the record type and project start date when using the PCAL record with the ADD command.
- You can change the project start date or completion date in the PCAL record using the PROJ CALENDAR command.

PERIOD CLOSEOUT

The PERIOD CLOSEOUT record resets the current period costs and resource quantities to zero.

<i>Field Name:</i>	Record Type
<i>Columns:</i>	1-15
<i>Example:</i>	PERIOD CLOSEOUT

Comments ■ The PERIOD CLOSEOUT record must be preceded by the UPDATE record.

PREC

PREC records (identical to SUCC records) describe precedence relationships in terms of successor activities. Use either record to add a new successor relationship or to delete an existing one.

Field Name:	Record Type	Input Type	Activity ID	Successor 1				Successor 2			
				Activity ID	Rel. Type	Lag	Driving Flag	Activity ID	Rel. Type	Lag	Driving Flag
Columns:	1-4	5	6-15	17-26	28-29	34-37	38	39-48	50-51	56-59	60
Example:	PREC		A100	A101			*	A102			*

Successor 3			
Activity ID	Rel Type	Lag	Driving Flag
61-70	72-73	78-81	82
A103			*

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PREC or SUCC
Input Type	5	A	--	Normally blank; D to delete all successors for this activity
Activity ID	6-15	A/N	-	10-character activity ID
Successors 1, 2, and 3	17-26 39-48 61-70	A/N	--	10-character activity ID
- Activity ID				
- Relationship Type	28-29 50-51 72-73	A	L	SS for start-to-start FF for finish-to-finish FS or blank for finish-to-start SF for start-to-finish D to delete relationship between two activities

Field Name	Columns	Contents	Justification	Valid Data
- Lag	34-37 56-59 78-81	N	R	For hourly, shift, daily, weekly, or monthly calendars -999 to 9999; lag expressed in planning units
- Driving Flag	38 60 82	A	--	* to specify driving relationship; – to remove driving flag

Comments

- You must use PREC, SUCC, or PRED records to define activity relationships.
- When using INPUT, the activities referenced by PREC and SUCC records need not be defined with ACTV records first. These activities must, however, be defined somewhere in the same run stream.
- When using UPDATE, activities must already exist before they are referenced by PREC and SUCC records. These activities can be defined in a previous run stream, earlier in the same run stream, or by using the interactive program.
- PREC or SUCC records do not change data for existing relationships. To change data such as relationship types or lag, delete the existing relationship and then redefine it with a new PREC or SUCC record.
- Activity IDs with fewer than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project for all ACTV, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records.
- PREC or SUCC records normally follow ACTV records.
- Data entered in columns 38, 60, and 82 are overwritten when you calculate a schedule or level the project.

PRED

The PRED record describes precedence relationships in terms of predecessor activities. Use this record to add a new predecessor relationship or to delete an existing one.

Field Name:	Record Type	Input Type	ActivityID	Predecessor 1			
				Activity ID	Rel. Type	Lag	Driving Flag
Columns:	1-4	5	6-15	17-26	28-29	34-37	38
Example:	PRED		A100	C300	SS	10	*

Predecessor 2				Predecessor 3			
Activity ID	Rel. Type	Lag	Driving Flag	Activity ID	Rel. Type	Lag	Driving Flag
39-48	50-51	56-59	60	61-70	72-73	78-81	82

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PRED
Input Type	5	A	--	Normally blank; D to delete all predecessors for this activity
Activity ID	6-15	A/N	-	10-character activity ID
Predecessors 1, 2, and 3 - Activity ID	17-26 39-48 61-70	A/N	--	10-character activity ID
- Relationship Type	28-29 50-51 72-73	A	L	SS for start-to-start; FF for finish-to-finish; FS or blank for finish-to-start; SF for start-to-finish; D to delete relationship between two activities
- Lag	34-37 56-59 78-81	N	R	For hourly, shift, daily, weekly, or monthly calendars -999 to 9999; lag expressed in planning units

Field Name	Columns	Contents	Justification	Valid Data
- Driving Flag	38 60 82	A	--	* to specify driving relationship; – to remove driving flag

Comments

- When using INPUT, the activities referenced by PRED records need not be defined with ACTV records first. These activities must, however, be defined somewhere within the same run stream.
- When using UPDATE, activities must already exist before they are referenced by PRED records. These activities can be defined in a previous run stream, earlier in the same run stream, or by using the interactive program.
- A PRED record does not change the data for existing relationships. To change data such as relationship types or lag, delete the existing relationship and then redefine it with a new PRED record.
- Activity IDs with fewer than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project for all ACTV, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records.
- PRED records normally follow ACTV records.

PROJ

P3 uses the PROJ record to identify the project being created or updated and to execute commands. A PROJ record must appear at the beginning of a run stream, and the final record in a batch input file must be a PROJ record with the END command. PROJ records within the run stream execute additional commands.

<i>Field Name:</i>	Record Type	Project Name	Command Data	Autocost Option	User- name	Output Device
<i>Columns:</i>	1-4	6-9	11-48	49	51-58	75-139
<i>Example:</i>	PROJ	APEX	EXECUTE	C/R	JOHN	PRINTN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character project name
Command Data	11-48	A	L	ACCESS ADD CALENDAR CALENDAR LIST COPY AND RENAME END ESTABLISH TARGET ETC EXECUTE GENERATE INTERRUPT LIST STATISTICS REMOVE RULES SCHEDULE TITLE DATA TITLE LIST

Field Name	Columns	Contents	Justification	Valid Data
Autocost Option	49	A		Used only with the RULES command to specify when the application of Autocost rules occurs: when moving between cells, or between resources. Valid entries are C or R.
Username	51-58	A/N	L	Valid username
Output Device	75-139	A/N	L	Any filename with or without extension; use PRINTN to send output to printer port LPT1; leave blank to save output in P3.OUT

Comments

- P3 uses only the filename specified in columns 75-139 of the first PROJ record to store output. If the designated filename does not include a drive/path/extension, P3 writes it to your USERLOC directory. P3 ignores all filenames that appear later in the batch input file.

RATE

Resource cost rates are unit prices per quantity of resource used to calculate budget, actual to date, and estimate to complete costs. These rates can vary over time.

Resource limits are used only during resource leveling. Specify normal and maximum limits of resource availability. The limits can vary over time.

The RATE record defines the price per unit for resources.

Field Name:	Record Type	Input Type	Resource	Del.	Price Per Unit—Interval 1			Price Per Unit—Interval 2			Price Per Unit—Interval 3		
					Amount	Date	Time	Amount	Date	Time	Amount	Date	Time
Columns:	1-4	5	6-13	14	15-22	23-29	30-34	35-42	43-49	50-54	55-62	63-69	70-74
Example:	RATE		FLD ENG		80.00	31DEC96		88.00	31DEC97				

Price Per Unit—Interval 4		
Amount	Date	Time
75-82	83-89	90-94

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	RATE
Input Type	5	A	--	Normally blank; D to delete rates for all resources
Resource	6-13	A	L	Eight-character resource code
Delete	14	A	--	Normally blank; D to delete rates for only this resource (all intervals)

Field Name	Columns	Contents	Justification	Valid Data
Intervals 1-4	15-22	N	R	Type the amount with decimal point
- Price Per Unit	35-42 55-62 75-82			
- Date	23-29 43-49 63-69 83-89	A/N	L	Through date of price interval in DDMMYY format
- Time	30-34 50-54 70-74 90-94	A/N	L	Time in HH:MM format

Comments

- Specify up to six price intervals by adding a second RATE record in which intervals 5 and 6 replace intervals 1 and 2, respectively.
- Define resources using the RETL record before you assigning rates.
- RATE records are optional. If you include them, P3 uses them for automatic costing when generating reports.
- Omit the (through) date for an interval if the price holds constant through the end of the project.

RCAL

Each resource has its own calendar, which is initially a copy of one of the project's base calendars. Specify each resource's calendar, its base calendar, and the resource's work schedule using RCAL records.

<i>Field Name:</i>	Record Type	Input Type	Resource	Base Calendar	Use Base Calendar's Workweek	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
<i>Columns:</i>	1-4	6	8-15	17-18	20	22-45	47-70	72-95	97-120	122-145	147-170	172-195
<i>Example:</i>	RCAL	A										

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	RCAL
Input Type	6	A	--	A
Resource	8-15	A/N	L	Defined resource name
Base Calendar	17-18	N	R	ID number of a valid base calendar from 1-31
Base Calendar's Workweek	20	A		Y/N
Sunday	22-45	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day
Monday	47-70	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day
Tuesday	72-95	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day
Wednesday	97-120	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day
Thursday	122-145	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day

Field Name	Columns	Contents	Justification	Valid Data
Friday	147-170	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day
Saturday	172-195	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day

RHOL

Each resource calendar can have its own holidays to differentiate the resource calendar from its base calendar template. Define resource holidays using the RHOL record.

<i>Field Name:</i>	Record Type	Input Type	Resource	Date of Holiday	Hourly Work Indicator
<i>Columns:</i>	1-4	6	8-15	17-23	25-48
<i>Example:</i>	RHOL	A			

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	RHOL
Input Type	6	A	--	A
Resource	8-15	A/N	L	Valid resource name
Date of Holiday	17-23	A/N	R	DDMMYY
Hourly Work Indicators	25-48	A/N		Indicate work (1) or nonwork (.) for each of the 24 hours of the day

REMOVE

The REMOVE command deletes a project from the P3 projects directory (PROJ).

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-16	51-58
<i>Example:</i>	PROJ	APEX	REMOVE	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project
Command	11-16	A	--	REMOVE
Username	51-58	A/N	L	Valid username

Output

- This command deletes project files. If you use this record to delete a project group, P3 also deletes all projects within it.

Error Conditions

- Attempting to remove a project that is not on file
- Error in PROJ record
- Insufficient rights to delete project

RESR

The RESR record assigns resources and resource quantities. This record also allows you to combine cost accounts, categories, and costs with resources.

Field Name:	Record Type	Input Type	Activity ID	Del.	Resource	Original Amount	RTC	Lag	Dur.	Pct. Compl.
Columns:	1-4	5	6-15	16	17-24	25-32	33	34-36	37-40	41-43
Example:	RESR		A100		DES ENG	60	T			

Cost		Actual Amount		Forecast Amount		Res.	Frac.	Res. Driv.
Acct.	Acct. Cat.	TP/TD	Amt.	QCTC	Amt.	Des.	Pct.Compl.	Dur. Flg
44-54	55	56-58	59-66	67-69	70-77	80	81-85	86
311	L	TDQ	60	ETQ			15.4	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	RESR
Input Type	5	A	--	Normally blank; D to delete all resource/cost data for this activity
Activity ID	6-15	A/N	--	Use a 10-character value for each ACTV record
Delete	16	A	--	Normally blank; D to delete resource and cost amounts for this resource and cost account, and to delete resource and cost account
Resource	17-24	A/N	L	Any valid resource as defined in Resource Dictionary(see RETL record)
Original Amount	25-32	N	R	Original estimate or budget amount in monetary or resource units. Valid numbers are up to 2,147,483,647 (if displaying zero decimals) or 21,474,836.47 (if displaying two decimals.) Do not include commas when typing data.

Field Name	Columns	Contents	Justification	Valid Data
RTC	33	A	--	R - original amount is units per timeperiod T - original amount is budgeted quantity C - original amount is budgeted cost
Resource Lag	34-36			Normally blank to spread resources evenly over activity duration; value of 1-999 delays start of resource use by this number of workperiods after activity start, then spreads use evenly over resource duration
Resource Duration	37-40	N	R	Normally blank to set resource duration equal to activity duration; value of 1-9999 represents number of workperiods resource is used after time lag
Resource Percent Complete	41-43	N	R	0-100
Cost Account Number	44-54	A/N	L or R	Optional data; assign up to 11 alphanumeric characters to identify resource/cost account
Cost Account Category	55	A	L	Optional data; use one character to specify cost category. Category must be defined in ACAT record or interactive system first
Actual Amount --TP or TD -- Quantity or Cost	56-58	A	L	TDC for actual-to-date cost; TDQ for actual-to-date quantity; TPC for this-period cost; TPQ for this-period quantity *
-- Amount	59-66	N	R	Actual this period qty/cost amount in monetary or resource units. Valid numbers are up to 2,147,483,647 (if displaying zero decimals) or 21,474,836.47 (if displaying two decimals.) Do not include commas when typing data.

Field Name	Columns	Contents	Justification	Valid Data
Forecast Amount -- QCTC	67-69	A	L	ETC = estimated cost to complete ETQ = estimated quantity to complete FRC = estimated (forecast) cost at completion FRQ = estimated (forecast) quantity at completion
-- Amount	70-77	N	R	Estimated (forecast) amount in monetary or resource units. Valid numbers are up to 2,147,483,647 (if displaying zero decimals) or 21,474,836.47 (if displaying two decimals.) Do not include commas when typing data.
Resource Designator	80	A/N	--	Any value; combine with resource name or nonlinear curve lines to identify resources assigned to this activity
Fractional Percent Complete	81-85	N	R	0.0 - 100.0
Resource-Driven Duration Flag	86	A	--	* to designate as driving; Blank for not driving; D to delete

* TPC (this-period cost) and TPQ (this-period resource quantity) appear in the Cost and Resources forms as actual cost this period and actual quantity this period. If you specify TPC or TPQ, P3 accumulates TPC to calculate the actual cost to date and TPQ to calculate actual quantity to date (according to Autocost rule 6 - Link Actual to Date and Actual this Period).

Comments

- Resource and cost accounts must exist before RESR records can be processed.
- The activity referenced by the activity ID must exist, or ACTV records must precede the RESR record.

- Alphanumeric Activity IDs of less than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project for all records.
- If you initially combine a resource and account number in a single RESR record, specify both fields again when updating resource and cost information. If you specify only the resource or cost account number when updating, the P3 Batch system assigns the data to the activity as a new resource or cost account.
- If estimate/forecast to complete is omitted, P3 calculates it automatically during scheduling if you have chosen to perform Autocost computations during each schedule calculation.

Actual-to-date amounts, if omitted, are calculated automatically at time of resource/cost reporting or scheduling.

Daily rates of resources/costs are calculated automatically.

- The C in column 33 of each RESR record indicates that the amount applied to the activity is the budgeted cost of this resource. The TDC in columns 56-58 specifies that the amount in columns 59-66 is the actual cost to date. In columns 67-69, ETC refers to the estimated cost to complete. Compare these data to the RESR records shown in Assigning Resource Quantities.
- This record contains two percentage fields: columns 41-43 and 81-85. To record a percentage with decimal places, use the Fractional Percent Complete field; if you record percentages in both fields, P3 uses the latter by default.

RETL

Use the RETL record to define resources in the Resource Dictionary and to define cost accounts in the Cost Accounts Dictionary.

<i>Field Name:</i>	Record Type	Input Type	Resource	Cost Account	Delete	Unit of Measure	Resource or Cost Account Title	Driven Dur. Flag
<i>Columns:</i>	1-4	5	6-13	15-26	27	28-31	33-72	73
<i>Example:</i>	RETL		FLD ENG			MD	FIELD SERVICE ENGINEER	*

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	RETL
Input Type	5	A	--	Normally blank; D to delete Resource and Cost Accounts Dictionaries
Resource	6-13	A/N	L	Any value
Cost Account	15-26	A/N	L or R	Any value
Delete	27	A	--	Normally blank; D to delete resource or cost account number and title
Unit of Measure	28-31	A	R	Any value
Resource or Cost Account Title	33-72	A	L	Any value
Resource-Driven Duration Flag	73	A	--	* to designate driving; Blank for not driving; D to delete

Comments

- You must process RETL records before assigning resources and/or cost accounts to individual activities.
- Assign titles to resources or cost accounts.
- You can justify account numbers of fewer than 11 characters to the left or the right. However, you should justify numbers consistently in the Account Number field for all RETL and RESR batch records.

RETURN

The RETURN command must terminate batch sequences that begin with the EXECUTE command or the TITLE DATA command. Multiple RETURN records can appear in one run stream.

<i>Field Name:</i>	Record Type
<i>Columns:</i>	1-6
<i>Example:</i>	RETURN

RLIM

Use the RLIM record to specify resource limits for leveling.

Field Name:	Record Type	Input Type	Resource	Del.	Resource Limits—Interval 1					Resource Limits—Interval 2				
					Normal	Max.	Until	Date	Time	Normal	Max.	Until	Date	Time
Columns:	1-4	5	6-13	14	18-22	27-31	33-37	39-45	46-50	55-59	64-68	70-74	76-82	83-87
Example:	RLIM		FLD ENG		4	6	UNTIL							

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	L	RLIM
Input Type	5	A	--	Normally blank; D to delete all limits for all resources
Resource	6-13	A/N	L	Eight-character resource
Delete	14	A	--	Normally blank; D to delete limits for only this resource (all intervals)
Resource Limits Intervals 1 and 2 - Normal	18-22 55-59	N	R	Normal periodic resource availability
- Maximum	27-31 64-68	N	R	Maximum periodic resource limit
- Until	33-37 70-74	A	L	UNTIL
- Date	39-45 76-82	A/N	L	Through date/time of resource limits in DDMMYY format; Blank to use project completion date
- Time	46-50 83-87	A/N	L	Time in HH:MM format

Comments

- Impose up to six sets of limit intervals by creating additional RLIM records. Use a second RLIM record for intervals 3 and 4 and a third RLIM record for intervals 5 and 6. These additional records must follow the first RETL record of the series.
- Leave the last Date field you use blank if the resource limits extend through the project finish.
- If the last through date field has a date earlier than the project's finish date, P3 assumes unlimited availability for the resource from the through date until the project's finish.
- P3 accepts RLIM records for resources defined by RETL records.

SNUM

Use the SNUM command to show the registered serial numbers that are in use or not in use.

<i>Field Name:</i>	Record Type	List	ListingType	CurrentOnly	User name	Output Device
<i>Columns:</i>	1-4	6-9	11-18	20-26	51-58	75-139
<i>Example:</i>	SNUM	LIST	INUSE	CURRENT	JOHN	P3.OUT

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	SNUM
List	6-9	A	--	LIST
Listing Type	11-18	A	--	INUSE NOTINUSE
Current Only	20-26	A	L	Current - Serial number for current version only; Blank - all versions
Username	51-58	A/N	L	Valid username
Output Device	75-139	A/N	L	Any filename with or without extension; use PRINTN to send output to printer port LPT1; leave blank to save output in P3.OUT

Comments

- When you process a run stream that uses the SNUM record, one serial number is always locked.
- The SNUM record is a stand-alone record; it does not need to be part of a project run stream.

SUCC

SUCC records (identical to PREC records) describe precedence relationships in terms of successor activities. Use either record to add a new successor relationship or to delete an existing one.

Field Name:	Record Type	Input Type	Activity ID	Successor 1				Successor 2			
				Activity ID	Rel. Type	Lag	Driving Flag	Activity ID	Rel. Type	Lag	Driving Flag
Columns:	1-4	5	6-15	17-26	28-29	34-37	38	39-48	50-51	56-59	60
Example:	PREC		A100	A101			*	A102			*

Successor 3			
Activity ID	Rel Type	Lag	Driving Flag
61-70	72-73	78-81	82
A103			*

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PREC or SUCC
Input Type	5	A	--	Normally blank; D to delete all successors for this activity
Activity ID	6-15	A/N	-	10-character activity ID
Successors 1, 2, and 3	17-26 39-48	A/N	--	10-character activity ID
- Activity ID	61-70			
- Relationship Type	28-29 50-51 72-73	A	L	SS for start-to-start; FF for finish-to-finish; FS or blank for finish-to-start SF for start-to-finish; D to delete relationship between two activities

Field Name	Columns	Contents	Justification	Valid Data
- Lag	34-37 56-59 78-81	N	R	For hourly, shift, daily, weekly, or monthly calendars -999 to 9999; lag expressed in planning units
- Driving Flag	38 60 82	A	--	* to specify driving relationship; – to remove driving flag

Comments

- You must use PREC, SUCC, or PRED records to define activity relationships.
- When using INPUT, the activities referenced by PREC and SUCC records need not be defined with ACTV records first. These activities must, however, be defined somewhere in the same run stream.
- When using UPDATE, activities must already exist before they are referenced by PREC and SUCC records. These activities can be defined in a previous run stream, earlier in the same run stream, or by using the interactive program.
- PREC or SUCC records do not change data for existing relationships. To change data such as relationship types or lag, delete the existing relationship and then redefine it with a new PREC or SUCC record.
- Activity IDs with fewer than 10 characters can be positioned anywhere in the Activity ID field, but this position must be consistent throughout the project for all ACTV, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records.
- PREC or SUCC records normally follow ACTV records.
- Data entered in columns 38, 60, and 82 are overwritten when you calculate a schedule or level the project.

RULES

Use the RULES command to set Autocost rules for estimating costs within the project group.

<i>Field Name:</i>	Record Type	Project Name	Command	Set	Date
<i>Columns:</i>	1-4	6-9	11-15	17-20	22-28
<i>Example:</i>	PROJ	APEX	RULES	EMH	24JUL96

Autocost Rules								Autocost	Recalculate	User-
1	2	3	4	5	6	7	8	Option	Costs	name
30	32	34-35	37-39	41-42	44	46	48	49	50	51-58
Y	N	SN	YYY	YY	Y	N	B	C	N	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project group
Command	11-15	A	--	RULES
Set	17-20	A/N	L	Any value
Date	22-28	A/N	L	Date rules set in DDMMYY format
Autocost Rules	30	A	--	Y or N (Y to link remaining duration and schedule percent complete)
- Rule 1				
- Rule 2	32	A	--	Y or N (Y to freeze resource units per day)
- Rule 3	34	A	--	A or S (A to add actual to estimate to complete, S to subtract actual from estimate at completion)
	35	A	--	Y or N (Y to allow negative estimate to complete)
- Rule 4	37	A	--	Y or N (Y to use current unit prices to recalculate budget costs)

Field Name	Columns	Contents	Justification	Valid Data
	38	A	--	Y or N (Y to use current unit prices to recalculate actual costs)
	39	A	--	Y or N (Y to use current unit prices to recalculate estimate to complete costs)
- Rule 5	41	A	--	Y or N (Y to use update percent complete against budget to estimate actual quantity)
	42	A	--	Y or N (Y to use update percent complete against budget to estimate actual cost)
- Rule 6	44	A	--	Y or N (Y to link actual date and actual this period)
- Rule 7	46	A	--	Y or N (Y to link budget and EAC for nonprogressed activities)
- Rule 8	48	A	--	B or E (E to calculate variance as EAC - Budget, B to calculate variance as Budget - EAC)
Autocost Option	49	A	--	Specify application of Autocost rules when moving between cells or resources. Valid entries are C or R.
Recalculate Costs	50	A	--	Y or N (Y to recalculate and store cost each time the schedule is calculated)
Username	51-58	A/N	L	Valid username

Comments

- The RULES command affects the rules of the project group. Use the interactive program to set rules for individual projects within the project group.

TITLE DATA

Use the TITLE DATA command to specify project group and individual project titles as well as titles for activity codes, resources, and cost accounts. Complete this command with a RETURN record.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-20	51-58
<i>Example:</i>	PROJ	APEX	TITLE DATA	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Group Name	6-9	A/N	--	Four-character name of existing project group
Command	11-20	A	--	TITLE DATA
Username	51-58	A/N	L	Valid username

Comments ■ Use the DRT1 and DRT2 record layouts to define headings for your output.

TITLE LIST

The TITLE LIST command lists all titles for codes, resources, and projects in the database.

<i>Field Name:</i>	Record Type	Project Name	Command	Username
<i>Columns:</i>	1-4	6-9	11-20	51-58
<i>Example:</i>	PROJ	APEX	TITLE LIST	JOHN

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	PROJ
Project Name	6-9	A/N	--	Four-character name of existing project group
Command	11-20	A	--	TITLE LIST
Username	51-58	A/N	L	Valid username

Comments

- This command produces a list of titles for projects, codes, and resource and cost accounts.

Error Conditions

- Error in PROJ record
- Nonexistent project name

UPDATE

Use the INPUT or UPDATE record to add or change activity data. The very first run after adding a new project must use the INPUT record. All subsequent runs require the UPDATE record. If you specify INPUT for a project that already contains activity information and you execute the batch job, the batch program prompts you to either overwrite the existing data with the new data or terminate the batch run.

<i>Field Name:</i>	Record Type	Validate	Full List	Open-End List
<i>Columns:</i>	1-6	8	9-11	13-15
<i>Example:</i>	UPDATE		NO	NO

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-6	A	L	INPUT or UPDATE
Validate	8	Blank or X		Normally blank; X suppresses normal data validation
Full List	9-11	A	L	YES to print complete list of all activity records in run stream; NO to print only a diagnostic list of project-level data and open-end list, if specified
Open End List	13-15	A	L	YES to print list of activities with no successors or predecessors; NO to print only a diagnostic list of project-level data and full list, if specified

Comments

- An INPUT or UPDATE record must follow a PROJ record with the EXECUTE command.
- An INPUT or UPDATE run stream must end with a RETURN record.
- Use the INPUT record only once to initiate a project; thereafter, use UPDATE.

- An INPUT or UPDATE record must precede any ACTV, PREC, SUCC, PRED, CODE, RESR, PERIOD CLOSEOUT, LIST, or DATE record.
- When using INPUT, the activities referenced by PREC, SUCC, and PRED records need not be defined with ACTV records first. These activities must, however, be defined somewhere within the same run stream.
- When using UPDATE, activities must already exist before they are referenced by PREC, SUCC, and PRED records. These activities can be defined in a previous run stream, earlier in the same run stream, or by using the activity detail forms.
- If you suppress validation, the program will not check for the existence of referenced activities, resources, or cost accounts. Relationships to non-existent activities will not be prevented.

Activity ID Field

The Activity ID field appears in the ACTV, ACTVR, PREC, SUCC, PRED, CODE, RESR, LIST, and DATE records. The position of data in this field is user-defined; however, it must be consistent with the P3 interactive system and among all batch records. The interactive system automatically right justifies activity IDs that contain all numeric characters. If the activity ID includes one or more letters, blank spaces, or special characters, P3 positions the data as they are entered. Activity IDs can use all 10 available characters.

How you choose to position data in the Activity ID field also affects the definition of code fields within the activity ID; the CDEF record references column positions within the available 10 characters relative to the first (left-most) column.

WBSA

Use the WBSA record to assign a WBS code to an activity.

<i>Field Name:</i>	Record Type	Input Type	Activity ID	WBS Code
<i>Columns:</i>	1-4	5	6-15	17-64
<i>Example:</i>	WBSA		A1ØØ	AMØ12B

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	WBSA
Input Type	5	A	--	Normally blank; D to delete the WBS value for the activity
Activity ID	6-15	A/N	--	Any value up to 10 alphanumeric characters
WBS Code	17-64	A/N	L	1-48 alphanumeric characters. This code must correspond with the field-width definition set with the WBSD record, excluding separators.

Comments

- One WBSA record is permitted per activity.
- The activity referenced by the activity ID must exist.

WBSD

Use the WBSD record to define the WBS structure, including level number, field width, and separator character. Each WBSD record defines a single WBS level.

<i>Field Name:</i>	Record Type	Input Type	WBS Level Number	Field Width	Separator Character
<i>Columns:</i>	1-4	5	11-12	14-15	17
<i>Example:</i>	WBSD		3	6	

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	WBSD
Input Type	5	A	--	Normally blank; D to delete this definition
Level Number	11-12	N	R	Level number 1-20
Field Width	14-15	N	R	1-48
Separator	17	--	--	P3 uses a period (.) by default, but you can use any character

Comments

- Field widths for a single level cannot exceed 10 characters. The combined field widths for all WBS levels cannot exceed 48 characters.

WBST

WBST records define WBS codes and their titles once the WBS structure is defined using WBSD records.

<i>Field Name:</i>	Record Type	Input Type	WBS Code	Title
<i>Columns:</i>	1-4	5	9-56	58-105
<i>Example:</i>	WBST		AMØ12B	SYSTEM ENGINEERING

Field Name	Columns	Contents	Justification	Valid Data
Record Type	1-4	A	--	WBST
Input Type	5	A	--	Normally blank; D to delete this WBS title
WBS Code	9-56	A/N	L	Specify a WBS code without separators
Title	58-105	A/N	L	Title (description) for the WBS code

Comments

- WBST records normally follow the WBSD records.
- The level at which the value of each record is placed in the outline is determined by which WBS field contains the right-most nonblank character.
- The batch processor supplies any superior levels that do not already exist.
- Embedded blanks are significant in the WBS code.

Batch Error Messages

This section lists common P3 Batch system error messages. If you encounter an error not listed here, check each record in the run stream for valid data, contents, and code justification. Also, refer to the sample run streams to verify that records are in the correct sequence in the file.

Error 1	Invalid Report Type Specified
Error 2	Invalid Target Specification Suggestion: Make sure the target specified is an existing target schedule
Error 3	Invalid Code Element Suggestion: This error often indicates that the report specification contains activity codes that do not exist for this project. Verify spelling and justification in the specified criteria. Create another report specification.
Error 4	Invalid Line Type Specification
Error 5	Activity Line Not Specified
Error 6	Invalid Record Type for Reporting Suggestion: Before processing a batch file, make sure you save all the necessary blank spaces. Check the spelling of record names.
Error 7	Invalid Report Date
Error 8	Invalid Copy and Rename Specifier
Error 9	Invalid MASK Element Suggestion: Review the report specification. The mask element specified for skip may not apply to the current project.
Error 10	Invalid File Specified on Report Record
Error 11	Invalid Start Day of Week (Day)
Error 12	Not Used

Error 13	Project Record Data Error Suggestion: Examine the PROJ record in the batch file. Make sure you allowed all necessary blank spaces (no tabs allowed), and that all alphabetic characters are upper case.
Error 14	Invalid Command Suggestion: Check the command specified on the PROJ record in the batch file.
Error 15	Project Not Found Suggestion: Check the spelling of the project name. The number "zero" and the letter "O" are not interchangeable.
Error 16	Invalid Establish Target Specifier
Error 17	Project Has Not Been Scheduled
Error 18	Project in Use, Access Denied
Error 19	Input Record Sequence Error Suggestion: Check the order of input records in the batch file. If adding a new project, make sure a PCAL record immediately follows the PROJ record.
Error 20	Calendar Specification Error Suggestion: Check the dates specified in the PCAL record of the batch file. All dates must be in DDMMYY HH:MM format (for example, 01JAN97 06:00). Hours and minutes are used for hourly projects only.
Error 21	Invalid Project Group Name
Error 22	Project Group Name Already Exists Suggestion: Change the name of the project group to be added to avoid duplicates.
Error 23	Target Schedule Designation Invalid Suggestion: Verify the column position of codes on the ESTABLISH TARGET line. Make sure the target schedule is either 1 or 2.
Error 24	Invalid Execute Command Suggestion: Check the spelling and spacing of the EXECUTE command in the batch file.
Error 25	Invalid Report Command

Error 26	Invalid Selection Element Suggestion: Verify the spelling and justification of the specified criteria on the SELE line in the file.
Error 27	Invalid Equality Type
Error 28	Invalid Limit Values
Error 29	Invalid Input Record Select File Established
Error 30	Invalid Record Type in Update Run
Error 31	Invalid Activity ID - Data Ignored Suggestion: Check columns 6-15 of the batch file against the appropriate record layout. When adding new activities, make sure the PREC, PRED, or SUCC record follows the ACTV record for the activity referenced in columns 6-15. Or execute the PREC, PRED, or SUCC record in a separate run after all activities have been added to the network. The error diagnostic report displays asterisks under the field in error to indicate the correct format.
Error 32	Activity Not Found in File Suggestion: Check the activity number. When adding new activities, make sure the PREC, PRED, or SUCC record for a new activity immediately follows the ACTV record for that activity. Or execute the PREC, PRED, or SUCC record in a separate run after all activities have been added to the network.
Error 33	Added Activity Already Exists Suggestion: Check the activity number.
Error 34	Format Error, Columns Flagged Suggestion: The field with the incorrect format is specified by asterisks. Make sure the data do not exceed specified field limits and that numeric fields do not contain alphabetic data. Also, check your project for any activities that have start-to-start relationships with finish milestones or finish-to-finish relationships with start milestones.
Error 35	New Activity Already Exists
Error 38	Illegal Cursor Position (row/column)
Error 39	Invalid Resource

Error 40	Attempt to Delete a Nonexistent Project
Error 46	Invalid Record Type in Loading Library Suggestion: Make sure columns 1-4 in the batch file indicate a record type that is correctly associated with the TITLE DATA command. Check the record sequence for the correct type of specification.
Error 47	Invalid Data Suggestion: Check the data on the CDEF record of the batch file. Make sure all field definitions are valid.
Error 48	Invalid Title Data Suggestion: Check the COTL record of the batch file for consistency.
Error 49	Code Value Not in File Suggestion: Check the spelling of the code value for which a title is to be deleted.
Error 54	Resource/Cost Account Not Used by This Activity
Error 55	Array Overflow
Error 56	Resource/Cost Account Both Blank
Error 57	Error in ES Targ
Error 59	Summary Must Be Preceded by SORT
Error 60	Missing NLOG Record
Error 61	Invalid Masking Specified
Error 62	Invalid Code Fields Specified
Error 63	No Timescale Specification Record Suggestion: Specify a timescale in hours/shifts/days/weeks/months when requesting a timescale report.
Error 64	Invalid Timescale Specified Suggestion: The report specification contains an invalid timescale. Make sure H, S, D, W, or M (for hours, shifts, days, weeks, or months) is specified for the timescale, and check the range of months specified to ensure that the dates do not exceed the project calendar.

Errors 66 to 75	Unused
Error 76	Invalid Resource Code Suggestion: Check the spelling of resource code(s) in the batch file. Make sure a resource code is defined before it is assigned to activities. Verify the code justification as defined in the Resource Dictionary (RETL record).
Error 77	Invalid Equality Type
Error 78	Invalid Select Element Suggestion: The selection criteria specified in the resource/cost report specification are invalid. Check the RSEL line in the run stream for valid data.
Error 80	Invalid Resource - Data Ignored Suggestion: Make sure you defined resource codes in the batch file before you execute the UPDATE or INPUT record.
Error 81	Invalid Critical Flag
Errors 82 to 88	Unused
Error 90	Invalid Target File Specified Suggestion: Review the target specification in the run stream. Make sure Target 1 exists before you produce a resource/cost report with target data.
Error 91	Invalid Report Specification
Error 92	Invalid Cumulative Curve Specification
Error 93	Invalid Profile Curve Specification
Error 94	Invalid Usage Report Specification
Error 95	Invalid Resource Report Run Stream Record Suggestion: This error usually occurs when selection criteria in the report specification are invalid. Verify the code justification (R or L) as defined in the Resource Dictionary (RETL record). Also check the RSEL line in the file for valid selection criteria.
Error 96	Invalid Resource Report Specified
Errors 98 to 99	Undefined Calendar

P3 3.0 Files

In this chapter:

P3 Data Tables

P3 Data Table Connections

P3 File Structures

Project Directory File (XXXXDIR.P3)

XXXXDIR.P3: Data in 100001 record

XXXXDIR.P3: Data in 100002 record

XXXXDIR.P3: Data in 100003 record

USERFIL.P3

XXXXACT.P3

XXXXREL.P3

XXXXRES.P3

XXXXSPR.P3

XXXXLOG.P3

XXXXWBS.P3

XXXXTTL.P3

XXXXACC.P3

XXXXRLB.P3

XXXXITM.P3: Data in Dictionary Records

XXXXITM.P3: Data in Data Item Value Records

XXXXSTR.P3

XXXXHOL.P3

XXXXCAL.P3

XXXXSRT.P3

XXXXREP.P3

XXXXPLT.P3

XXXXAC2.P3

USERS50.P3

XXXXLAY.P3

XXXXSTW.P3

P3.INI File

This chapter provides the contents of the P3 files for version 3.0, including data tables and their structures. In addition, the contents of the P3.INI file are listed.

Data dictionary files provide the link to P3's project files and must be created for any P3 project you want to access through another ODBC-compliant application. This chapter provides the contents of the data tables; one data table exists for each project file. For purposes of accessing P3 with other applications, such as Microsoft Excel or InfoMaker, you need only to choose the data tables that contain the fields you want. The *P3 Data Tables* section lists just the fields contained in the data tables.

P3 Data Tables

The following data tables are created for a project, depending on which mode (normal or advanced) you select on the Update Data Dictionary dialog box in P3. Normal mode generates the most commonly used fields in P3, such as activity ID, early dates, late dates, and total float. Advanced mode lists all P3 data fields within the report writers.

P3 updates the data dictionary files, FILE.DDF and FIELD.DDF, and creates three temporary files (XXXXAIT, XXXXRIT, and XXXXDTL) so you can readily access project data. The XXXXAIT, XXXXRIT, and XXXXDTL file structures are provided later in this chapter..

Table	Normal Mode	Advanced Mode
ACC - Cost Accounts	CostAccountNumber ACCTitle	CostAccountNumber ACCTitle

Table	Normal Mode	Advanced Mode
ACT - Activities	ActID Activity Title Calld OrigDur RemDur Pct ES EF LS LF TotalFloat Activity codes FreeFloat ESInternal EFInternal LSInternal LFInternal ASorEDConstraint AForLLDConstraint ASFlag AFFlag	ActID Activity Title Calld OrigDur RemDur Pct ES ESHour EF EFHour LS LSHour LF LFHour TotalFloat Activity codes FreeFloat ESInternal EFInternal LSInternal LFInternal ASorEDConstraint AForLLDConstraint ASFlag AFFlag ASorConstraintFlag AForConstraintFlag SuspendDate ResumeDate Milestone CriticalFlag DurationCalcCode VarianceSort/Select ST Activity Type

Table	Normal Mode	Advanced Mode
AIT - Activity Custom Data Items	ActID	ActID Res CostAccountNumber ResourceID ActivityIDext
	Activity Custom Data Items	Activity Custom Data Items
DIR - Project Directory	Not available	ProjVersion AutocostSet AutocostDate AutocostRules ScheduleLogic InterruptibleFlag LatestEarlyFinish Target#1Name Target#2Name LeveledSwitch TotalFloatType StartDayOfWeek MasterCalType GraphicSummaryProj DecimalPlaces SummaryCalID EndDateFromM/S SSLagFromAS/ES WBSW01 WBSS01...WBSS20 HolidayConvention ProjType MastCalTypeAux SchedMast/Sub UpdateSubDataDate
DTL - Activity Code Details	CodeName CodeValue Description	CodeName CodeValue Description

Table	Normal Mode	Advanced Mode
HOL - Calendar Holidays	Not available	CallID StartOfHoliday EndOfHoliday
LOG - Activity Log	ActID LogSeqNumber LogMask LogRecord Info	ActID LogSeqNumber LogMask LogRecord Info ActIDExt
REL - Activity Relationships	PredAct SuccAct LagType DrivingRel	PredAct PredActExt SuccActExt SuccAct LagType DrivingRel

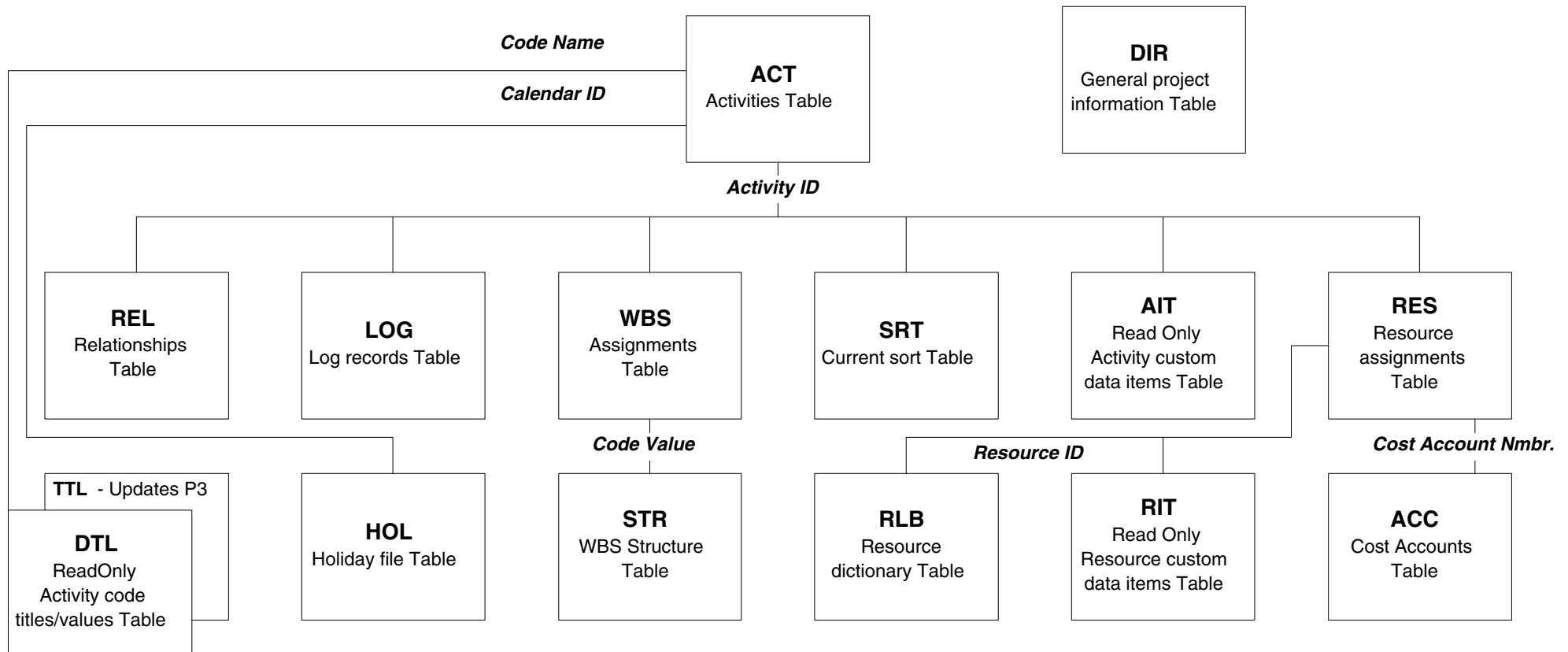
Table	Normal Mode	Advanced Mode
RES - Resources	ActID ResID CostAccountNumber PctComplete Lag RemDur ResDesignator DrivingResource BudgetQuantity QTYThisPeriod QTYToDate QTYAtCompletion BudgetCost CostThisPeriod CostToDate CostAtCompletion	ActID ResID CostAccountNumber PctComplete Lag RemDur ResDesignator DrivingResource BudgetQuantity QTYThisPeriod QTYToDate QTYAtCompletion BudgetCost CostThisPeriod CostToDate CostAtCompletion STResEarlyStart STResEarlyFinish STResLateStart STResLateFinish
RIT - Resource Custom Data Items	ActID Res CostAccountNumber ResourceID ResourceCustomDataItems	ActID Res CostAccountNumber ResourceID ActIDext ResourceCustomDataItems

Table	Normal Mode	Advanced Mode
RLB - Resource Dictionary	ResID	ResID
	UnitOfMeasure	UnitOfMeasure
	ResTitle	ResTitle
	EscalationVal1	EscalationVal1
	EscalationDate1	EscalationDate1
	EscalationVal2	EscalationVal2
	EscalationDate2	EscalationDate2
	EscalationVal3	EscalationVal3
	EscalationDate3	EscalationDate3
	EscalationVal4	EscalationVal4
	EscalationDate4	EscalationDate4
	EscalationVal5	EscalationVal5
	EscalationDate5	EscalationDate5
	EscalationVal6	EscalationVal6
	EscalationDate6	EscalationDate6
	NormLimVal1	NormLimVal1
	MaxLimVal1	MaxLimVal1
	LimToDate1	LimToDate1
	NormLimVal2	NormLimVal2
	MaxLimVal2	MaxLimVal2
	LimToDate2	LimToDate2
	NormLimVal3	NormLimVal3
	MaxLimVal3	MaxLimVal3
	LimToDate3	LimToDate3
	NormLimVal4	NormLimVal4
	MaxLimVal4	MaxLimVal4
	LimToDate4	LimToDate4
	NormLimVal5	NormLimVal5
	MaxLimVal5	MaxLimVal5
	LimToDate5	LimToDate5
	NormLimVal6	NormLimVal6
	MaxLimVal6	MaxLimVal6
	LimToDate6	LimToDate6
	ShiftNum	ShiftNum
	ShiftLimitTable	ShiftLimitTable
	DrivingResource	DrivingResource

Table	Normal Mode	Advanced Mode
SRT - Current Sort	Not available	SeqNumber ActID
STR - WBS Dictionary	Indicator CodeValue Codetitle	Indicator CodeValue Codetitle IndicatorExt CodeValueSeg1
TTL - Code Titles	Not available	CodeName CodeValue Description SortOrder
WBS - WBS Records	ActivityID CodeValue Indicator	ActivityID CodeValue Indicator

P3 Data Table Connections

To access multiple data tables at one, you need to link key fields. For example, if you want to report on cost accounts for each activity, you need to link the ACT and RES files through the activity ID field, and then link the RES and ACC files through the cost account number field. The following figure shows the data tables created in advanced mode, and indicates the fields used to link the data tables.



P3 File Structures

P3 file structures are index-accessed, variable-length files created by Btrieve. Btrieve provides multikey access to records; relational access among files; automatic key maintenance support for duplicate, modifiable, and segmented keys; and unrestricted file sizes. Some files have multiple or segmented keys.

File names are shown in parenthesis and XXXX is used to denote the four-character project name. Data locations within a file refer to four-byte integer or character words. In some cases a four-byte word may contain multiple logical fields, and not all bytes in a single word may be used.

Key fields are listed for each file structure. ND indicates no duplicates allowed, D indicates duplicates are allowed, M indicates modifiable, and SEG indicates segmented.

Project Directory File (XXXXDIR.P3)

Key: CHAR*8 (ND-M)

BYTE	WORD	DESCRIPTION
1-4	1	4 blanks for project group name or project name (CHAR*4)
5-8	2	Sequence number (INT*4) 0 = main record 100001 - 100003 = calendar information
9-12	3	Product code 0 = P3 1 = Finest Hour Product code * 10000 + rev. * 100 (0 * 10000 + 3.2 * 100 = 320)
13-16	4	Project start date (yyyymmddqq)
17-20	5	Holiday Convention 0 = default 1 = don't move holiday to nearest workday
21-24	6	Project ID (CHAR*2)
25-28	7	Project finish date (yyyymmddqq)
29-32	8	Report counter
33-56	9-14	Code field length definitions (4 field length per word)
57-60	15	Type of project (PDM = 0)
61-64	16	Data date (last scheduled) (yyyymmddqq)

BYTE	WORD	DESCRIPTION
65-68	17	Calendar start date (yyyymmddqq)
69-72	18	Oracle flag (CHAR*4) ('ORAC' if Oracle project, else Btrieve)
72-108	19-27	Default company title (CHAR*36)
09-144	28-36	Default project title (CHAR*36)
145-192	37-48	Default report title (CHAR*48)
193-208	49-52	Project version (CHAR*16)
209-240	53-60	Not used.
241-244	61	Autocost set field (CHAR*4)
245-248	62	Autocost date field (yyyymmddqq)
249-264	63-66	Autocost rules (14 CHAR*1) 'Y'/'N' - Link RD and PCT 'Y'/'N' - Freeze UPT 'A'/'S' - Add (ATD+ETC) or subtract (EAC-ATD) 'Y'/'N' - Allow negative ETC 'Y'/'N' - Recompute BC if BQ changed 'Y'/'N' - Recompute CTD if QTD changed 'Y'/'N' - Recompute CTC if QTC changed 'Y'/'N' - Estimate QTD using BQ x PCT 'Y'/'N' - Estimate CTD using BC x PCT 'B'/'E' - Variance is Budget-EAC or EAC-Budget 'Y'/'N' - Autocost during scheduling 'Y'/'N' - Link ATD and ATP

BYTE	WORD	DESCRIPTION
		'Y'/'N' - Link EAC and Budget
		'C'/'R' - Autocost by Cell or Resource
265-276	67-69	Not used
277-280	70	Schedule logic (INT*4)
		0 = retained logic
		1 = progress override
281-284	71	Interruptible flag (INT*4)
		0 = non-interruptible
		1 = interruptible
285-288	72	Latest early finish date (yyyymmddqq)
289-292	73	Target 1 name (CHAR*4)
293-296	74	Not used
297-300	75	Target 2 name (CHAR*4)
301-304	76	Not used
305-308	77	Leveled switch (INT*2)
		0 = Not leveled
		1 = Leveled early
		2 = Leveled late
		3 = Leveled both
		Total Float Type (INT*2)
		0 = Start
		1 = Finish
		2 = Most critical

BYTE	WORD	DESCRIPTION
309-312	78	Schedule open ends as critical flag (CHAR*1) Leveling - save data into SPR file flag (CHAR*1) 1 = don't store data 0 = store data
311-312		Not used
313-316	79	Start day of the week (INT*2) Mon = 1 Tue = 2 Wed = 3 Thu = 4 Fri = 5 Sat = 6 Sun = 7
317-320	80	Project group calendar type (INT*2) Hour=3 Day=5 Week=6 Month=7
321-324	81	Byte 321: Graphic reports - summary projects (CHAR*1) 'S'= summary project else blank Byte 322: Scheduling in project group, project,

BYTE	WORD	DESCRIPTION
		or both ('M'/'S'/'B')
		Byte 323: Decimal places ('0'/'2')
		Byte 324: Update project's data date to match project group's data date ('Y'/'N')
325-328	82	Byte 325: Summary calendar ID
		Byte 326: Calculate total float using end date of project group or project M = project group S = project
		Byte 327: SS lag from AS/ES '0' = ES '1' = AS
		Byte 328: OEM/ANSI Flag '1' = Converted
329-368	83-92	WBS widths and separators (CHAR*40) (Stored Width, Sep., Width, Sep., etc.; with Width as CHAR*1 and Sep. as CHAR*1)
369-372	93	INTRPROJ project index (INT*4)
373-376	94	INTRPROJ last scheduled date (INT*4)
377-380	95	Leveling: Maximum number of splits (INT*2) Leveling: Maximum split nonworktime (INT*2)
381-384	96	Leveling: Min contiguous worktime between splits (INT*2) Leveling: Minimum % of UPT for stretching (INT*2)
385-386	97	Leveling: Maximum % of UPT for crunching (INT*2)

BYTE	WORD	DESCRIPTION
387-396		Project Code 01 (CHAR*10)
397-406		Project Code 02 (CHAR*10)
407-416		Project Code 03 (CHAR*10)
417-426		Project Code 04 (CHAR*10)
427-436		Project Code 05 (CHAR*10)
437-446		Project Code 06 (CHAR*10)
447-456		Project Code 07 (CHAR*10)
457-466		Project Code 08 (CHAR*10)
467-476		Project Code 09 (CHAR*10)
477-486		Project Code 10 (CHAR*10)
487-490		Last Close Out Period (INT*4)
491-504		Not used

Physical record size = (126*4)+(8*0 keys allow duplicates)=504 bytes

Page size = 512 bytes [unused bytes per page = 512-6-(1*504)] = 2 bytes

XXXXDIR.P3: Data in 100001 record

Key: CHAR*8 (ND-M)

BYTE	WORD	DESCRIPTION
------	------	-------------

1-4	1	Four blank characters
5-8	2	100001 = Extension record #1
9-442	3-111	Start hour of work for each day of the week for each calendar (INT*2)
443-473	111-119	Not used
476-480	120	Number of shifts per day (0-6)(INT*4)
481-484	121	First shift start time in quarter hours (INT*4)
485-488	122	Duration of shifts in quarter hours (INT*4)
489-504	123-126	Not used

XXXXDIR.P3: Data in 100002 record

Key: CHAR*8 (ND-M)

BYTE	WORD	DESCRIPTION
1-4	1	Four blank characters
5-8	2	100002 = Extension record #2
9-442	3-111	Finish hour of work for each day of the week for each calendar (INT*2) FINHR(7,31) Value = 96 for a full day
443-473	111-119	Defines which calendar IDs are used (31 1-byte values) Not used = 0; Hour = 3; Day = 5; Week = 6; Month = 7
474-504	119-126	Not used

XXXXDIR.P3: Data in 100003 record

Key: CHAR*8 (ND-M)

BYTE	WORD	DESCRIPTION
1-4	1	Four blank characters
5-8	2	100003 = Extension record #3
9-504	3-126	Calendar description of each of the 31 calendars (CHAR*16)
	<u>Byte</u>	<u>Word</u> <u>Description</u>
	9-24	3-6 Cal.1 title
	25-40	7-10 Cal.2 title
	41-56	11-14 Cal.3 title
	etc.	

USERFIL.P3

Key: CHAR*8 (ND-M)

BYTE	WORD	DESCRIPTION
1-8	1-2	Username
9-12	3	Add project: always 0 (INT*2) (Bytes 11-12 not used)
13-20	4-5	Output filename for DOS (CHAR*8)
21-24	6	Summary percent option (INT*4) 0 = Duration; 1 = Resource; 2 = Cost
25-28	7	Graphics reports plotter/printer type for WIN (INT*4)
29-32	8	Budget/earned value indicator 0 = Current budget (INT*4) 1 = Target budget
33-36	9	Not used
37-40	10	Printer type (INT*2) Byte 39: Compressed mode ('Y'/'N') Byte 40: Graphic report sight lines '.' = short dashed line '-' = long dashed line 'S' = solid line
41-104	11-26	Printer codes
105-112	27-28	Password
113-120	29-30	Not used

BYTE WORD DESCRIPTION

121-156	31-39	Bar chart printer characters 1st byte of each word = character 2nd byte of each word = normal color 3rd byte of each word = critical color 4th byte of each word = not used
157-160	40	User access type (INT*2) 10 = privileged user else = normal user Print sort/select criteria (INT*2)
161-164	41	Not used
165-172	42-43	Latest plotter output filename (CHAR*8)
173-176	44	Graphics report output: Output/Save/View/Ask ('O'/'S'/'V'/'A' - CHAR*1) Separate Sheets ('Y'/'N') (CHAR*1) Sheet size (INT*2)
177-180	45	Not used
181-184	46	PV Printer Number (INT*2) Postscript Font (INT*2)
185-192	47-48	Latest View Filename (CHAR*8)
193-196	49	Not used
197-200	50	PV Output Device (CHAR*4)
201-220	51-55	Not used
221-224	56	Validate Activity Codes (INT*4) 0 = don't validate codes (default) 1 = validate activity codes
225-228	57	Not used

BYTE WORD DESCRIPTION

229-232	58	Not used
233-236	59	Latest mail message number (INT*4)
237-240	60	Byte 237 = Disk Specification (CHAR*1) Byte 238 = Mail Notification (CHAR*1) Byte 239 = Autosort number (CHAR*1) Byte 240 = Activity Forms window (CHAR*1)
241-276	61-69	Not used
277-280	70	Byte 277: Tabular reports output: Print, Save, View, Ask ('P'/'S'/'V'/'A') Byte 278: Not used Bytes 279-280: Lines per page (INT*2)
281-360	71-90	Not used
361-384	91-96	User full name (CHAR*24)
385-396	97-99	User telephone number (CHAR*12)
397-436	100-109	Graphics reports output directory path (CHAR*40)
437-444	110-111	Not used
445-456	112-114	Output filename for WIN (CHAR*12)
457-504	115-126	Not used

XXXXACT.P3

Key: CHAR*10 (ND-M)

BYTE	WORD	DESCRIPTION
1-12	1-3	Activity ID (CHAR*10)
13-16	4	Free float (INT*2) Calendar ID # (INT*2)
17-20	5	Duration calculation code (INT*4) ZT = 1 ZF = 2 HA = 3 XF = yyyyymmddqq
21-24	6	Original duration (INT*2) Remaining duration (INT*2)
25-28	7	Actual start or early date constraint flag (INT*2) 99 = Actual 1 = ES 3 = EF 6 = ON 10 = MS 11 = MF Actual finish or late date constraint flag (INT*2) 99 = Actual 2 = LS 4 = LF 6 = ON
29-32	8	Percent complete (INT*4) (4 digits = PCT*10)

BYTE	WORD	DESCRIPTION
33-36	9	Early start (yyyymmddqq)
37-40	10	Late start (yyyymmddqq)
41-44	11	Actual start (yyyymmddqq)
45-48	12	Actual finish (yyyymmddqq)
49-52	13	Early finish (yyyymmddqq)
53-56	14	Late finish (yyyymmddqq)
57-60	15	Total Float (INT*2)
		Byte 59: Milestone (CHAR*1)
		'0' = NM
		'1' = SM
		'2' = FM
		'5' = SF
		'6' = FF
		Byte 60: Critical flag ('C' or blank)
61-64	16	Bytes 61-62: Not used
		Byte 63: Estimate Quality
65-68	17	Reserved for SureTrak use
69-72	18	SureTrak Activity Type (CHAR*1)
		0 = Task; 1 = Independent; 2 = Meeting; 3 = SM; 4 = FM; 5 = Hammock; 6 = WBS;
		7 = Topic; 8 = SF; 9 = FF
		SureTrak Leveling Type (CHAR*1)
		0 = Normal; 1 = Immediate; 2 = Splittable; 3 = Stretchable;
		4 = Crunchable; 5 = Stretchable and Crunchable
		Bytes 71-72 not used
73-136	19-34	Activity codes (64 characters)

BYTE WORD DESCRIPTION

137-184	35-46	Activity title (48 characters)
185-188	47	Suspend date (yyyymmddqq)
189-192	48	Resume date (yyyymmddqq)
193-196	49	Constraint types (4 CHAR*1)
197-200	50	Constraint #1 (yyyymmddqq)
201-204	51	Constraint #2 (yyyymmddqq)
205-208	52	Constraint #3 (yyyymmddqq)
209-212	53	Constraint #4 (yyyymmddqq)
213-216	54	Early start date - Btrieve
217-220	55	Late start date - Btrieve
221-224	56	Early finish date - Btrieve
225-228	57	Late finish date - Btrieve
229-232	58	Byte 229: Early start hour (1-24) Byte 230: Late start hour (1-24) Byte 231: Early finish hour (1-24) Byte 232: Late finish hour (1-24)
233-234	59	Byte 233: Actual start (' ' or 'A') Byte 234: Actual finish (' ' or 'A')
235-236		Not used
237-244	60-61	Not used

Physical record size = (61*4) = 244 bytes

Page size = 1024 bytes

Unused bytes per page = 1024-6-(244*4) = 42 bytes

XXXXREL.P3

Key 1: CHAR*26 (ND-M)
 Key 2: CHAR*26 (ND-M-SEG)
 Segment 1: Words 4-6
 Segment 2: Words 1-3
 Segment 3: First 2 bytes of word 7

BYTE	WORD	DESCRIPTION
1-12	1-3	Predecessor activity (CHAR*10)
13-24	4-6	Successor activity (CHAR*10)
25-28	7	Successor lag type (INT*2) SS = 1 FS = 2 FF = 3 SF = 4 Successor lag value (INT*2)
29	8	Driving relationship (CHAR*1) D = successor early dates are driven by predecessor

Physical record size = (7*4)+1 + (8*0 key allow duplicates) = 29 bytes
 Page size = 512 bytes
 Unused bytes per page = 512-6-(29*17) = 13 bytes

XXXXRES.P3

Key 1:CHAR*10 (D-M) Words 1-3
 Key 2:CHAR*8 (D-M) Words 4-5
 Key 3:CHAR*31 (ND-M-SEG)
 Segment 1: Words 6-8
 Segment 2: Words 4-5
 Segment 3: Bytes 1-10
 Segment 4: Byte 39

BYTE	WORD	DESCRIPTION
1-12	1-3	Activity ID(CHAR*10)
13-20	4-5	Resource ID (CHAR*8)
21-32	6-8	Cost Account Number (CHAR*12)
33-36	9	Percent complete (INT*2) (4 digits = PCT*10) Lag (INT*2)
37-40	10	Resource remaining duration (INT*2) Byte 39: Resource ID (CHAR*1) Byte 40: Driving Resource (CHAR*1) '*' = driving blank = not driving
41-44	11	Original quantity budget estimate
45-48	12	Actual quantity for period
49-52	13	Actual quantity to date
53-56	14	Forecast quantity
57-60	15	Early start
61-64	16	Early finish

BYTE	WORD	DESCRIPTION
------	------	-------------

65-68	17	Not used
69-72	18	Original cost budget estimate
73-76	19	Actual cost for period
77-80	20	Actual cost to date
81-84	21	Forecast cost
85-88	22	Late start
89-92	23	Late finish
93-96	24	Not used

NOTE: Values in words 11-14 and 18-21 have been multiplied by 100 if the decimal places setting in byte 323 of DIR file is equal to '2'.

Physical record size = $(24 \times 4) + (8 \times 3 \text{ keys allow duplicates}) = 120 \text{ bytes}$

Page size = 1024 bytes [unused bytes per page = $1024 - 6 - (120 \times 8) = 58 \text{ bytes}$]

XXXXSPR.P3

Key: CHAR*31 (ND-M)

BYTE	WORD	DESCRIPTION
------	------	-------------

1-10	1-3	Activity ID (CHAR*10)
11-18	3-5	Resource (CHAR*8)
19-30	5-8	Cost account (CHAR*12)
31	8	Resource ID/Curve (CHAR*1)
32	8	Unused (CHAR*1)
33-??	9-??	Resource/cost spread data:

For task activities, the key is the Activity ID and blanks for the resource, cost account, and curve. The data is a series of start and finish dates signifying the periods that the activity works. Limit is 8000 pairs.

For independent activities, the key is the Activity ID, resource, cost account, and values that represent the usage per workperiod on the resource calendar (first value starts at the resource ES). Limit is 16000 workperiod values.

Physical record size = Variable record length
(Maximum record = 64032 bytes)

XXXXLOG.P3

Key: CHAR*14 (ND-M)

BYTE	WORD	DESCRIPTION
------	------	-------------

1-12	1-3	Activity ID (CHAR*10)
13-16	4	Log sequence number (INT*2) Mask character (CHAR*2) (Mask is not part of key) Log sequence number: 1-99 = log information
17-64	5-16	Log record information

Physical record size = $(16*4)+(8*0 \text{ keys allow duplicates}) = 64 \text{ bytes}$

Page size = 1024 bytes

Unused bytes per page = $1024-6-(64*15) = 58 \text{ bytes}$

XXXXWBS.P3

Key 1: CHAR*11 (ND-M-SEG)
 Segment 1: bytes 1-10
 Segment 2: byte 61

Key 2: CHAR*59 (ND-M-SEG)
 Segment 1: byte 61
 Segment 2: bytes 13-60
 Segment 3: bytes 1-10

BYTE	DESCRIPTION
1-10	Activity ID (CHAR*10)
11-12	Unused
13-60	Code value (CHAR*48)
61	Indicator (CHAR*1) 'W' for WBS records

Physical record size = (61)+(8*0 keys allow duplicates) = 61 bytes
 Page size = 1024 bytes
 Unused bytes per page = 1024-6-(61*16) = 42 bytes

XXXXTTL.P3

Key 1: CHAR*16 (ND-M)

Key 2: CHAR*17 (ND-M-SEG)

Segment 1:word 1 or

Segment 2:byte 65

Segment 3:words 2-4

BYTE	WORD	DESCRIPTION
1-4	1	Code field designation (INT*4) (10 digits, 5 pairs)
5-16	2-4	Code field value (right-justified) (4 characters per word) OR ***** in first 8 bytes, code field name in last 4 bytes (CHAR*12)
17-64	5-16	Title description (48 characters)
65	17	User-defined sort order CHAR(1) - CHAR(255)

Physical record size = $(16*4)+1 + (8*0 \text{ keys allow duplicates})=65$ bytes

Page size = 1024 bytes

Unused bytes per page = $1024-6-(65*15) = 43$ bytes

XXXXACC.P3

Key: CHAR*12 (ND-M)

BYTE	WORD	DESCRIPTION
1-12	1-3	Cost Account Number (CHAR*12) ***** in first 8 bytes, category in last 4 bytes
13-16	4	Not used
17-56	5-14	Cost Account Title (CHAR*40) or Cost Category Description (CHAR*8)

Physical record size = (14*4)+(8*0 keys allow duplicates) = 56 bytes
 Page size = 512 bytes
 Unused bytes per page = 512-6-(56*9) = 2 bytes

XXXXRLB.P3

Key: CHAR*10 (ND-M-SEG)
Segment 1:words1-2
Segment 2:bytes 173-174

BYTE	WORD	DESCRIPTION
1-8	1-2	Resource code (CHAR*8)
9-12	3	Unit of measure (CHAR*4)
13-52	4-13	Resource description (40 characters)
53-56	14	1st escalation value
57-60	15	1st escalation up to date (yyyymmddqq)
61-68	16-17	2nd escalation
69-76	18-19	3rd escalation
77-84	20-21	4th escalation
85-92	22-23	5th escalation
93-100	24-25	6th escalation
101-104	26	1st normal limit value
105-108	27	1st maximum limit value
109-112	28	1st limit up to date (yyyymmddqq)
113-124	29-31	2nd limit
125-136	32-34	3rd limit
137-148	35-37	4th limit
149-160	38-40	5th limit
161-172	41-43	6th limit

BYTE	WORD	DESCRIPTION
------	------	-------------

173-176	44	Shift number (1-6) (INT*2) (If no shift table, value is 1) Shift limit table (INT*2) 0 = No 1 = Yes
177-180	45	Driving resource (INT*2) 0 = No 1 = Yes

Physical record size = $(45 * 4) + (8 * 0 \text{ keys allow duplicates}) = 180 \text{ bytes}$

Page size = 1024 bytes [unused bytes per page = $1024 - 6 - (180 * 5) = 118 \text{ bytes}$]

XXXXITM.P3: Data in Dictionary Records

Key: CHAR*33 (ND-M)

Note: The structure of information described is repeated up to 8 custom data items.

BYTE	WORD	DESCRIPTION
1-32	1-8	32 asterisks (CHAR*32)
33		A = Activity custom data item R = Resource/cost custom data item
34-36		Not used
37-40		Field name (CHAR*4)
41		Field type (CHAR*1) 'C' = Character field 'S', 'F' = Start/finish date field 'N' = Numeric (0 decimals) 'P' = Precision (2 decimals)
42		Field length (CHAR*1) CHAR(1) through CHAR(20)
43-58		Data item description (CHAR*16)
59-??		Bytes 37-58 are repeated for up to 8 custom data items

Physical record size = Variable record length
Maximum record = 212 bytes

XXXXITM.P3: Data in Data Item Value Records

Key: CHAR*33 (ND-M)

BYTE	WORD	DESCRIPTION
1-10	1-3	Activity ID (CHAR*10)
13-20	4-5	Resource for resource items OR 8 asterisks for activity items (CHAR*8)
21-32	6-8	Cost account for resource items OR 12 asterisks for activity items (CHAR*12)
33	9	Resource ID for resource items OR 1 asterisk for activity items (CHAR*1)
37-??	10-??	When extracting custom data item values, remember that all Character field values occupy as much space as their defined length (rounded up to the nearest word boundary), and all other types (ie.Date/Numeric/Precision) occupy 4 bytes each.

Physical record size = Variable record length
Maximum record = 196 bytes

XXXXSTR.P3

- Key 1: CHAR*4 (D-M)
Bytes 1-4
- Key 2: CHAR*4 (D-M)
Bytes 9-12
- Key 3: CHAR*49 (ND-M-SEG)
Segment 1:Byte 1
Segment 2:Bytes 9-56

BYTE	DESCRIPTION
1	Indicator (CHAR*1) 'W' for WBS records.
2	Unused
3-4	Level number (INT*2)
5-8	Unused
9-56	Code value (CHAR*48)
57-104	Code title (CHAR*48)

Physical record size = (104)+(8*2 keys allow duplicates) = 120 bytes
 Page size = 512 bytes
 Unused bytes per page = 512-2-(120*4) = 26 bytes

XXXXHOL.P3

Key: CHAR*10 (ND-M-SEG)
 Segment 1:Bytes 1-2
 Segment 2:Bytes 3-6
 Segment 3:Bytes 7-10

BYTE	WORD	DESCRIPTION
------	------	-------------

1-12	1-3	Calendar ID (INT*2)
		1-31 = Calendar holidays
		32 = Global holidays
		101-131 = Calendar exceptions
		132 = Global exceptions
		Start of Holiday (INT*4)(bytes 3-6)
		End of Holiday (INT*4)(bytes 7-10)

Notes:

1. Annual holidays (04JUL) have 1970 for their year.
2. Full day holidays have 99 in the QQ portion of the start holiday date, REGARDLESS of planning unit.
3. For hourly projects, generic nonworkhours (12:00) have 01JAN72 in the date portion.

Physical record size = $(2*4)+2 + (8*0 \text{ keys allow duplicates}) = 10 \text{ bytes}$

Page size = 512 bytes

Unused bytes per page = $512-6-(10*50) = 6 \text{ bytes}$

XXXXCAL.P3

BYTE	DESCRIPTION
1-4	NCALS: Number of calendars defined (INT*4)
5-128	KALEN(31): Relates calendar ID to consecutive calendar number starting at 1(INT*4) CAL.ID = 1 (1)KALEN(1)=1 CAL.ID = 5 (5)KALEN(2)=5 CAL.ID = C (12)KALEN(3)=12
129-8048	KALS(1980): Bit pattern of work (0) and nonwork (1)periods (INT*4)
8049-12008	KALCUM(1980): Each element corresponds to KALS(1980)12008 to give the work period associated with each unit of time; values are offset by -32767 (INT*2)
12009-12136	KALBAK(32): Relates the consecutive calendar number to the actual calendar ID (INT*4) KALEN(1) = 1 KALBAK(1) = 1 KALEN(2) = 5 KALBAK(5) = 2 KALEN(3) = 12 KALBAK(12) = 3
12137-12198	CALTYP(31): Array containing planning unit for calendars that are defined. Calendars that are not defined contain 0 (INT*2)
12199-12202	KALSTR: Start of generated calendar in YYYYMMDDQQ format (INT*4)
12203-12206	5.0 KALFIN: End of generated calendar in YYYYMMDQQ format (INT*4)
12207-12210	5.0 NDATES: Number of planning units for project NDATES = (1980*32)/NCALS (INT*4)
12211-12214	5.0 NDIM: Dimension of KAL and KALCUM arrays (1980)(INT*4)
12215-12218	NHOLS: Number of holidays defined (INT*4)
12219-12222	MCL4: Planning unit of project (INT*4)
12223-12226	ADFIN: End of generated calendar in absolute time (INT*4)

BYTE	DESCRIPTION
12227-12230	ADST: Start of generated calendar in absolute time (INT*4)
12231-12234	DURSFT: Duration of shifts in quarter hours (INT*4)
12235-12238	NSHFT: Number of shifts per day (0-6) (INT*4)
12239-12242	TFSHFT: Time of the first shift of the day in quarter hours (INT*4)
12243-12246	ISDOFW: Start day of the week (1=MON,2=TUE,...7=SUN) (INT*4)
12247-12250	5.1 KALFIN: End of generated calendar in YYYYMMDDQQ format (INT*4)
12251-12254	5.1 NDATES: Number of planning units for project (INT*4)
12255-12258	5.1 NDIM: Dimension of KAL and KALCUM arrays (16000) (INT*4)
12259-12262	5.1 ADFIN: End of generated calendar in absolute time (INT*4)
12263-?????	5.1 extra data for KALS & KALCUM The amount of this data is given by: $((5.1 \text{ NDATES})/32 - (5.0 \text{ NDATES})/32) * \text{NCALS} * 6$ The data is stored for each calendar in turn, alternating elements of KALS and KALCUM

XXXXSRT.P3

Key 1: INT*4 (ND-M)

Key 2: CHAR*10 (ND-M)

BYTE	WORD	DESCRIPTION
1-4	1	Sequence number (INT*4)
5-16	2-4	Activity ID (CHAR*10)

Physical record size = $(4*4)+(8*0 \text{ keys allow duplicates}) = 16 \text{ bytes}$
 Page size = 1024 bytes
 Unused bytes per page = $1024-6-(16*63) = 10 \text{ bytes}$

XXXXREP.P3 / XXXXPLT.P3

Key 1: CHAR*6 (ND-M) in bytes 1-6

Key 2: CHAR*1 (D-M) in byte 7

BYTE	DESCRIPTION
1-2	Report/plot type (CHAR*2)
	RU = Res. profile CU = Cost profile
	RR = Res. cumulative CR = Cost cumulative
	RC = Res. control CC = Cost control
	RP = Res. productivity CP = Cost productivity
	RE = Res. earned value CE = Cost earned value
	RT = Res. tabular usage CT = Cost tabular usage
	RL = Res. loading CL = Cost loading
	RM = Res. matrix AM = Activity matrix
	EX = Export IM = Import
	SC = Scheduling NL = Network logic
	TD = Tabular data entry RW = Report writer
	Plot Types:
	TL = Timescale logic PL = Pure logic
	BC = Bar chart
3-4	Report Number (CHAR*2)
	01-99
	CHAR(1)-CHAR(255)

BYTE	DESCRIPTION		
5	Report Card Designation (CHAR*1)		
	CHAR(1) = REPORT	CHAR(70) = RSLD	CHAR(145) = GRP
	CHAR(5) = SELE	CHAR(75) = PEN	CHAR(150) = RSEL
	CHAR(10) = SORT	CHAR(76) = PEN1	CHAR(160) = VBAR
	CHAR(15) = SUMM	CHAR(80) = MASK	CHAR(162) = SCHD
	CHAR(20) = RESP	CHAR(85) = TDEC	CHAR(166) = ADD
	CHAR(25) = TMSC	CHAR(90) = SKIP	CHAR(170) = VUSG
	CHAR(30) = TSCA	CHAR(95) = BAND	CHAR(171) = IF
	CHAR(35) = BARC	CHAR(98) = SUMM	CHAR(172) = THEN
	CHAR(36) = DATM	CHAR(100) = RESL	CHAR(173) = ELSE
	CHAR(37) = DATA	CHAR(105) = RESO	CHAR(175) = RPWT
	CHAR(40) = NLOG	CHAR(110) = RACR	CHAR(180) = MATX
	CHAR(41) = WRIT	CHAR(115) = RDAT	CHAR(181) = MTXT
	CHAR(45) = PPDM	CHAR(120) = PROF	CHAR(185) = AMTX
	CHAR(46) = PADM	CHAR(125) = LABL	CHAR(186) = RMTX
	CHAR(50) = LOUT	CHAR(130) = CUMM	CHAR(247) = (Not Used)
	CHAR(55) = SPEC	CHAR(135) = RPEN	CHAR(248) = SRT1
	CHAR(60) = IMPO	CHAR(136) = RPN1	CHAR(249) = SRT2
	CHAR(61) = HEAD	CHAR(140) = USAG	CHAR(250) = SRT3
	CHAR(65) = DATE	CHAR(144) = LEVL	

BYTE	DESCRIPTION
6	CHAR(1) = first record CHAR(2-99) = following records
7	Report Series Letter (CHAR*1) A - Z
8-120	Report Card Data

Physical record size = Variable record length

XXXXAC2.P3

Key: CHAR*12 (ND-M)

BYTE	WORD	DESCRIPTION
1-4	1	Project Name (CHAR*4) (' ' = Project Group name)
5-12	2-3	Username (CHAR*8)
13-16	4	Access level (INT*2) 1 = read only; 2 = read write; 3 = exclusive read write; 4 = exclusive read only Project Owner (INT*2) 0 = not a project owner; 1 = project owner
17-20	5	Restricted access report series ID (CHAR*2)
21-24	6	Restricted access bit flags (INT*4)
25-32	7-8	Not used

Physical record size = (8*4)+(8*0 keys allow duplicates) = 32 bytes

Page size = 512 bytes

Unused bytes per page = 512-6-(32*15) = 26 bytes

USERS50.P3

Key: CHAR*20 (ND-M)

BYTE	WORD	DESCRIPTION
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1-4	1	Project Group Name (CHAR*4)
5-8	2	Project Name (CHAR*4)
9-16	3-4	Username (CHAR*8)
17-20	5	Reserved
21-24	6	Access Level (INT*2) <ul style="list-style-type: none"> 1 = Read only 2 = Read write 3 = Exclusive read write 4 = Exclusive read only Project Owner (INT*2) <ul style="list-style-type: none"> 0 = not project owner 1 = project owner
25-32	7-8	SureTrak

Physical record size = $(8*4)+(8*0 \text{ keys allow duplicates}) = 32 \text{ bytes}$

Page size = 512 bytes

Unused bytes per page = $512-6-(32*15) = 26 \text{ bytes}$

XXXXLAY.P3

Key: CHAR*6 (ND-M-SEG)
Segment 1:Bytes 1-2
Segment 2:Bytes 3-4
Segment 3:Bytes 5-6

BYTE	DESCRIPTION
1-2	Layout ID (CHAR*2)
3-4	Record type (INT*2)
	0 = Bar info (colors)
	1 = Screen colors
	2 = Date format
	3 = Default font
	4 = Endpoints
	5 = Filter specification
	6 = Font info
	7 = Graphic info (bars)
	8 = Bar label info
	9 = Tabular/graphic info
	10 = Grouping
	11 = View information
	12 = Outliner
	13 = Page breaks
	14 = Print options (general)

BYTE	DESCRIPTION
	15 = Print options (tabular/graphics)
	16 = Print titles
	17 = Resource/cost graphic info
	18 = Row heights
	19 = Scroll bar positions
	20 = Selection
	21 = Splitter positions
	22 = Tabular info (columns)
	23 = Timescale info
	24 = Layout title
	25 = Semaphore for writing to layout file
	26 = Items added for 1.1
5-6	Sequence number (INT*2)
7-250	Layout record data
Physical record size = Variable record length	

XXXXSTW.P3

P3 and SureTrak use this file to store and communicate information when using a SureTrak project in P3 or when using a P3 project in SureTrak.

- n Project configuration information
- n Single default layout (STW)
- n Layout pointer (last layout used)
- n Activity priorities
- n Filters
- n SureTrak resource dictionary information not supported by P3:
 - revenue
 - driving flags (stored elsewhere in P3)
 - leveling flags
 - base calendar (stored elsewhere in P3)
 - resource limits by project within a project group
- n Resource calendar information
- n Holidays for resource calendars
- n SureTrak target dates
- n Outline codes for project groups and member projects
- n SureTrak reports
- n Default activity codes

P3.INI File

The P3.INI file, located in the Windows directory, contains information about how P3 is configured. P3 uses the information in this file when you load P3 so that it starts with your preferred settings in place. Generally you do not need to change this file, since P3 makes the changes for you as you use P3. You can, however, change the file using a text editor such as P3 Look or Windows Notepad. To include remarks in the P3.INI file, begin each line of the remark with a semicolon (;). Before you make changes, you should always back up the P3.INI file. This chapter describes the contents of the P3.INI file, including optional settings that are not automatically written to the file by P3.

Organization of the file P3.INI is organized by section. Each section name is enclosed in brackets. For example, the section that controls the directories that P3 uses for program files, projects, and other program elements appears as [Directories]. Each line below the section name represents a setting related to the section's title. Each setting contains the name of the setting, followed by an equals sign and the specific value for the setting.

Most settings are added to the P3.INI file during Setup; other settings are optional. If you have used P3 since it was first installed, your P3.INI file will be slightly different than those settings listed in this section; it now contains any configuration options you set up while using P3.

[Directories]	Setting	Comments
	Progloc = N:\P3WIN\P3PROGS	Location of Read Only program files
	Workloc = N:\P3WIN\P3WORK	Location of Read/Write Program files
	Userloc = C:\P3WIN\P3OUT	Location of user-created & configuration files
	Proj = C:\P3WIN\PROJECTS	Default project directory
	Prmzloc = N:\P3WIN\P3WORK\PRMZFIL.P3	Location of PRMZFIL.P3/FH file
	UserfilLoc = N:\P3WIN\USERFIL.P3	Location of USERFIL.P3/FH file
	BatchProjLoc = C:\P3WIN\PROJECTS	Default project directory for Batch
	BatchLoc = C:\P3WIN\P3OUT	Default directory for Batch input file
	BackupRestoreDir= A:\	Default Backup/Restore directory
[International]	Setting	Comments
	Dictionary=C:\P3WIN\P3WORK\P3DICT.DAT	Variable points to the directory where the P3DICT.DAT file is stored. This file lists all the possible languages that a P3WIN Layout can use (without installing a special version of Windows with foreign language support.)
	Language=0x0409	The variable stores the last language setting used in P3.
	ForceNumericDateFormat=0	Set the variable to 0 to show all dates in this format: JAN/31/94 or 31/JAN/94
		Set the variable to 1 to show strictly numeric dates: 01/31/94 or 31/01/94
		This option controls which formats are available in the Format, Dates dialog box.

[ReportSmith]	Setting	Comments
	Message=1	<p>A setting of 1 indicates that P3 has not started ReportSmith yet; P3 will issue a warning message concerning not changing directories.</p> <p>A setting of 0 indicates that P3 has already started ReportSmith, and will not re-issue a warning message.</p>
[Calendar Options]	Setting	Comments
	NonWorkperiodText =	RGB value (color) for nonworkperiod text
	NonWorkperiodBkgd =	RGB value (color) for nonworkperiod background
	MonthlyIncrement =	# of months each click of the double-arrow buttons (on the vertical slide bar of the calendar) will move the calendar ahead or back for monthly calendars
[Display]	Setting	Comments
	Maximize = 1	Not Used
	WindowPos = 0,1,-1,-1,-1,-1,80,80,794,545	Exact coordinates for size of the screen.
	If the first 2 numbers are 2,3 then P3 starts in full screen mode.	If the display is moved off the screen, delete this section and it will be regenerated automatically upon starting P3.
	If the first 2 numbers are 0,1 then P3 starts in minimized mode.	
	The remaining numbers give the position and size of the minimized screen, and are saved each time you exit P3.	

[Display]	Setting	Comments
	File1 = C:\P3WIN\PROJECTS\APEX	The list of the last four projects opened, as seen in the file menu.
	File2 = C:\P3WIN\PROJECTS\ENGR	
	File2 = C:\P3WIN\PROJECTS\ENGR	
	File3 = C:\P3WIN\PROJECTS\CLIN	
	File4 = C:\P3WIN\PROJECTS\SWDV	
	DataDateWidth = X	Thickness of the data date line, expressed in points.
	StripLeadingBlanks = 0	A setting of 0 (default) preserves leading blanks, so that purely numeric Activity IDs are right-justified
		A setting of 1 removes leading blanks. Purely numeric Activity IDs are left-justified, but note that position-sensitive
		Activity IDs such as "A" or " A" will both be left-justified to "A".
	Unassigned =	Set the variable to the text you want to display in the grouping band for activities having no assigned value for cost account, cost category, or resource when grouping by cost account, cost category, or resource. By default (that is, if you omit this variable from the Display section) the banding text for the group will read "UNASSIGNED".
	Uncategorized =	Set the variable to the text you want to display in the grouping band for activities having no assigned activity code or activity ID code when grouping by activity codes or activity ID codes. By default (that is, if you omit this variable from the Display section) the banding text for the group will be blank.

[Toolbar]	Setting	Comments
	ToolTop = 21,20,22,57,	Initial toolbar icons (New, Open, Help, Tutorial)
	ToolTab = 21,20,72,73,74,37,42,58,59,60,25,74,39,67,68, 52,53,35,74,27,33,32,74,36,49,45,74,71,26,44, 74,41,70,65,74,22,57,	Toolbar icons displayed in Bar View
	ToolPng = 21,20,86,37,74,76,77,74,58,59,60,74,29,30,118 ,81,74,46,47,40,63,117,74,119,61,49,74,35,70, 65,74,80,79,75,121,74,22,	Toolbar icons displayed in PERT
	ShowToolTips =	1 = Show bubble help when mouse pointer rests on toolbar icons 0 = Do not show bubble help when mouse pointer rests on toolbar icons
	ColorIcons =	1 = display toolbar icons in color 0 = display toolbar icons in grayscale
	LargeIcons =	1 = large icons 0 = small icons
[Options]	Setting	Comments
	LineSeparator= <character>	Changes the line separator used in the Format Columns dialog box to a character other than the pipe symbol (). International users can use this switch if their keyboards do not have the pipe symbol.
	CreateSrtWithFlt = 1	Creates an SRT file every time P3 executes a filter. The SRT file is used in Batch (Generate From Sort) and Monte Carlo.

[Options]	Setting	Comments
	CopyExternalRels = 1	When copying activities to the clipboard, a setting of 1 copies all relationships involving the selected activities. In the Paste dialog, the checkbox labelled "Paste external relationships?" is only enabled if this option is set to 1 in P3.INI.
	PhysicalReadOnly = 0	The default setting is 0; set the variable to 1 to support Read Only project directories.
	ExclForActIDEdit = 0	A setting of 0 allows editing of Activity IDs without exclusive access. When set to 1, a user must have exclusive access to edit IDs.
	Debug = 0	If set to 1, debugging code is activated and sent to DBWIN. Use only when requested by Technical Support staff.
	UnlinkAllRels = 0	0 = unlink only Finish-To-Start relationships in the selected group. 1 = unlink all internal relationships in the selected group.
	AutoAdd = 1	Setting found in the Tools/Options/Activity Inserting dialog box. 1 = automatically numbers activities 0 = do not automatically number
	AutoIncrement = #	Setting found in the Tools/Options/Activity Inserting dialog box. # is the number by which you want to automatically increment activities.
	AddWithForm = 0	Setting found in the Tools/Options/Activity Inserting dialog box regarding the presence of the Activity Form while adding activities. 0 = activity form does not appear 1 = activity form appears

[Options]	Setting	Comments
	NoBorderInPatternLegend = 1	Default setting is 1 (no border drawn around the pattern legend section of the legend). Set the option to 0 and P3 draws a border.
	UsePolyPolygon = 1	Use this setting only if the borders of some polygons (such as necked bars, endpoints, and PERT activity end shapes) sporadically fail to appear when the screen redraws. This can occur with some graphics cards, and this setting should alleviate the problem.

[Curves]	Setting	Comments
	1="Linear,0,10,10,10,10,10,10,10,10,10,10,"	Default resource curves. Users can define up to 99 template curves and use the Template function in the Resource dictionary to list any 16 of them as the currently available curves.
	2="Triangular,0,2,6,10,14,18,18,14,10,6,2,"	
	3="Triangular Increase,0,2,3,6,7,9,11,13,14,17,18"	
	4="Triangular Decrease,0,18,17,14,13,11,9,7,6,3,2,"	
	5="Back Loaded,0,7,7,7,7,7,13,13,13,13,13,"	
	6="Front Loaded,0,13,13,13,13,13,7,7,7,7,7,"	
	7="Trapezoidal,0,2,7,11,15,15,15,15,11,7,2,"	
	8="Bell Shape,0,1,3,8,15,23,23,15,8,3,1,"	
	9="Three Step,0,8,8,8,13,13,13,13,8,8,8,"	

[Applications]	Setting	Comments
	App1=Monte Carlo	This section enables the launching of up to 5 applications from the tools menu. App# specifies the wording of the menu item on the tools menu. The number is underlined in the menu, and functions as a hotkey for starting the application.
	App2=MS Write	
	App3=Paint&brush	
	App4=SureTrak for Windows	
	App5=CC:Mail	
	Cmd1=c:\mcwin\mcprogs\mc.exe /u:\$user / d:\$projdir /p:\$proj /s:\$serial	Cmd# specifies the command P3 executes when the item is selected. Applications can be DOS- or Windows-based executables, or batch files.
	Cmd2=c:\windows\write.exe	
	Cmd3=c:\windows\pbrush.exe c:\windows\argyle.bmp	
	Cmd4=c:\stwin\stw.exe	
	Cmd5=read.bat	
[Layouts]	Setting	Comments
	ItemA=C:\P3WIN\PROJECTS\APEX	P3WIN keeps track of the last 25 layouts opened for each project. If a project isn't listed, P3 opens it using the first layout.
	C:\P3WIN\PROJECTS\APEX=01,A[] LRU=ABC	You can delete this section and P3 will regenerate it. Item<letter>= path to project and project name

[Layouts]	Setting	Comments
	ItemB=C:\P3WIN\PROJECTS\CLIN	Project = <layout number>, Letter assignment (in alphabetical order) LRU = all the letters that have been used by subsequent entries [] = set of brackets required in each entry
	C:\P3WIN\PROJECTS\CLIN=01,B[]	
	ItemC=C:\P3WIN\PROJECTS\ENGR C:\P3WIN\PROJECTS\ENGR=01,C[]	
[Currentscheme]	Setting	Comments
	Name=P3 Defaults	This and the following sections store color settings for default and user-defined color schemes. You can define up to 25 color schemes interactively using the Format, Screen Colors dialog box.
	Columns=0,56	
	Column Titles=0, 44	
	Timescale=0, 44	
	Bars background/text=0, 56	
	Highlight color=31006, 4	
	Normal usage=1	
	Above normal usage=6	
	Above maximum usage=3	
	Current	
	Current estimate curve=9	
	Earned value curve=2	
	Scheduled budget curve=11	
	Pure logic=56	
	Data Date=2	

[Colorscheme1]	Setting	Comments
	Name=Pale Blue Header	
	Columns=0,56	
	Column Titles=0, 44	
	Timescale=0, 44	
	Bars background/text=0, 56	
	Highlight color=31006, 4	
	Normal usage=1	
	Above normal usage=6	
	Above maximum usage=3	
	Current estimate curve=9	
	Earned value curve=2	
	Scheduled budget curve=11	
	Pure logic=56	
	Data Date=2	
[Mail Options]	Setting	Comments
	AddressSubstitution = 0/1	If this variable is set to 1 and automatic addressing is used, if P3 cannot send mail to the address found in the description of the data item it will look for an alternate address in the [Mail Addresses] section of P3.INI.

[Mail Options]	Setting	Comments
	Server =	Options are MAPI, VIM, or NOTES. If you have multiple mail systems installed and want to force P3 to choose one other than the system's default, specify it here.
	MultReciplItem =	Last code used for addressing. P3 sets it to an activity code value or the values "Resource", "Cost Account (11)" or "Cost Account (12)".
	Relationships = 0/1	Set to 1 to send relationships during a custom Send operation.
	LastSent =	This variable stores a value identifying all the items that were sent in the last mail message. Each item has a numeric value, and this calculated variable is the sum of all those values.
	ActivityEditKey = 0110110	Each digit of this variable refers to an activity data item that is sent: 0 for non-editable, 1 for editable
	ResourceEditKey = 0110110	Each digit of this variable refers to a resource data item that is sent: 0 for non-editable, 1 for editable
	StatusSheetType = 0	0 = custom status sheet 1 = standard sheet using RD 17 = standard sheet using PCT
	InboxMessageLimit = 150	Specify the maximum number of most-recent messages to display.
	ShowSendTargetMsg = 1	1 = issue a message reminding the sender to also send the target project if one exists 0 = do not issue a message

[Mail Addresses]	Setting	Comments
	MD=Demuth, Meg	Specify an alias address if the complete mail address is longer than 36 characters or if you don't want to see the actual E-mail address as a title in P3.
[Mail Act Fields]	Setting	Comments
	<All activity data items being sent will appear here>	
[Mail Res Fields]	Setting	Comments
	<All resource data items being sent will appear here>	
[Exclusive]	Setting	Comments
	C:\P3WIN\PROJECTS\APEX = #	# = 0 or 1 1 opens project in Exclusive mode; 0 opens project in non-exclusive mode. This option is saved for each project when you close it.

[Btrieve]	Setting	Comments
	patch110=1	Patch related to running OEM2ANSI automatically in ReportSmith. 1 = Don't run OEM2ANSI (use if working with a P3 for Windows project) 0 = Run OEM2ANSI (use if working with an older P3 for DOS project) This option and path only are relevant if the project uses characters in the extended ASCII character set (above 126).
	Debug =	If set to 1, all Btrieve operations in Batch and P3.EXE are dumped to DBWIN. Set this option only if requested by Primavera technical support personnel.
	Version =	Specifies the minimum version of Btrieve required to run P3. Default is 6.
	RetryCount =	Specifies the number of retries to attempt when a Btrieve call fails. This is only done on status codes that warrant a retry.
	ConvertToUNC = 1	1 = convert filenames to Universal Naming Convention format before passing to Btrieve 0 = turn off automatic conversion
[PrintOpts]	Setting	Comments
	PrintCalFontIndex = 1	Must be set to 1.

[PrintOpts]	Setting	Comments
	NoSkipMoveShiftText = #	<p># is a number that is the sum of any or all the numbers 1, 2, 4, and 8. The options corresponding to these numbers are described below. If you choose to use none of these options, do not include the NoSkipMoveShiftText setting at all.</p> <p>Options A through D allow the user to simulate the behavior of P3 version 1.1 regarding the placement of text around activity bars when the bars or their text were truncated by, or totally outside, the borders of the printed area defined by the timescale specified for printed output.</p> <p>Option A: Normally, P3 3.0 will not display text that is positioned to the left or the right of a bar if the left or right edge of the bar is not at least partially visible within the printed timeframe. You can force P3 to print the text even if the bar is not visible by adding 1 to the value of #.</p> <p>Option B: Normally, if the left or right edge of the printed timeframe truncates part of the text on one side of a bar, P3 3.0 will automatically move the text to the opposite side of the bar, assuming there is no other text already there. You can suppress this automatic feature by adding 2 to the value of #.</p>

[PrintOpts]	Setting	Comments
		<p>Option C: Normally, if the left or right edge of the timeframe being printed truncates part of the text on one side of a bar, P3 3.0 will automatically move the text to the opposite side of the bar and append it (following a separator character) to any other text already on the other side. You can suppress this automatic feature by adding 4 to the value of #.</p> <p>Option D: Normally, if text in the top-left, top, top-right, bottom-left, bottom, or bottom-right positions would be truncated by the beginning or end of the timescale, P3 will automatically shift the text to the left or right so that it can all appear. You can suppress this automatic feature by adding 8 to the value of #.</p>
[Extension]	Setting	Comments
	EXT = P3	Default project extension.
	BatchExt = P3	Default project extension for Batch.
[Performance]	Setting	Comments
	RCG Maximum Groups = 24	Number of groups cached in memory for resource/cost tables and profiles. Default is 24.
	RCG Background Spread = 0	<p>0 = Process resource/cost spread in the background so you can continue to work in the Bar view without delay.</p> <p>1 = Don't process in background; draw results before proceeding.</p>

[Performance]	Setting	Comments
	TabularGraphicsRowCache Size=200	Number of activities to read into cache. Default is 200.
[PrintSetup]	Setting	Comments
	GrayscaleMapping = 0	0 = Use colors (for Print Preview). 1 = Use grayscale mapping.
[StartUp]	Setting	Comments
	LastError = 0	0 = Startup detected no errors.
[Debug]	Setting	Comments
	RCG Level = DumpColumnInfo=	Options for use by technical support personnel while troubleshooting.
[Special Printers]	Setting	Comments
	SYMPTOMS AND CODES ARE LISTED BELOW:	This section is only used in resolving problems with unusual print devices. The term <printer name> refers to the name of the printer displayed in the File, Print Setup dialog box. If a problem exists on multiple printers, use the name "All Printers" as the <printer name>. If several of the described problems occur, add the values specified for each problem and use the total as the variable value.

[Special Printers]	Setting	Comments
	<printer name> = 128	When using a color printer, diagonal lines are drawn in a vertical curtain.
	<printer name> = 256	Text improperly positioned in the center of the Activity columns section of the layout.
	<printer name> = 1024	Prevents pen plotters from drawing relationship lines through activity boxes in the PERT view.
	<printer name> = 1	Prints non-driving relationship lines as dashes instead of dots.
	Width Offset = 3	Use if characters are dropped or repeated between horizontal pages of graphics output. Valid values are 1-6; try different values until the best one is found.
	Height Adjust = 1	Adjusts height of PRMTEXT. Use positive or negative values (in pixels) to increase or decrease the current height of Primavera Text objects if the text is being clipped during printing.
[Splash]	Setting	Comments
	SHOW = 1	0 = Don't display splash screen while loading P3. 1 = Display splash screen while loading P3.
[BackupRestoreOptions]	Setting	Comments
	Specifications = 1	1 = Restore report and plot specifications when restoring a backup. 0 = Don't restore report and plot specifications when restoring a backup.

[BackupRestoreOptions]	Setting	Comments
	SubprojectRelations = 1	1 = Restore relationships (within the project group) that are external to the project. 0 = Do not restore relationships (within the project group) that are external to the project.
	MergeSubdirectories = 1	1 = Copy new values added to project dictionaries to their project group dictionaries. 0 = Disregard new values.
	Compressed = 1	1 = Compressed backups. 0 = Uncompressed backups.
	RemoveAccessList = 1	1 = Remove access list when backing up. 0 = Don't remove access list when backing up.
	UseOldCompression = 1	1 = Use ARC compression to back up projects. Use this option to be compatible with P3Win version 1.1 and P3 for DOS. Default setting is 0 or blank.
[FindObjects]	Setting	Comments
	List Type = 0	Saves the last switch setting from the Edit, Find Objects dialog box. Values are: 0 = Both 1 = Attached 2 = Unattached

[Graphics]	Setting	Comments
	Max Objects = 600	Specify the maximum number of graphics objects to read into memory when opening a layout. If you cannot open a layout that contains a large number of attached objects, increasing this setting may resolve the problem.
[Executables]	Setting	Comments
	PrmBatchEXE = C:\P3WIN\PRMBATCH.EXE	In some circumstances, when running P3 across a network you can increase speed by storing and loading certain program files from your local hard drive rather than loading them across the network.
	P3BtrvEXE = C:\P3WIN\P3BTRV.EXE	This option specifies the location of certain P3 executable files. In addition, the file P3.EXE can be copied locally, but it need not be mentioned in this section; instead, point the P3 icon to the local directory. Also, include the local directory where you are storing these P3 executables as the first item in your path statement.
	ASortWinDLL = C:\P3WIN\ASORTWIN.DLL	Note: you can copy the entire PROGLOC directory to your local drive, or use this feature to obtain speed benefits without using the disk space to store the entire directory. If you are running the BTREIVE NLM (network loadable module), the files *.BIN from the PROGLOC directory must reside on the server rather than the local drive.

[Windows Help]	Setting	Comments
	JumpColor = 0 128 0	(default) green
	JumpColor = 0 0 128	blue
	JumpColor = 128 0 0	red
		<p>The JumpColor setting defines the display color of jumps (words that automatically display other help information when you click them) in P3 help. The argument to this parameter is the RGB value of the desired color. You can design your own colors by choose any value between 0 and 128 for the red, green, and blue components of the jump color. Three possibilities are shown above.</p>
[Batch]	Setting	Comments
	ProduceRTF = 1	<p>A setting of 1 produces all report output using RTF (rather than ANSI) text, even if none of the requested report specifications call for RTF.</p>
[AdvancedSchedule LevelOptions]	Setting	Comments
	LevelDump = 1	<p>Set the value to 1 to include resource usage per timeperiod in the leveling output report for resources being split/stretched/crunched.</p>
	StatDump = 1	<p>Set the value to 1 to write leveling data to a file, in ASCII format.</p>

[AdvancedSchedule LevelOptions]	Setting	Comments
	StatDumpFileName =	Specifies the StatDump filename (stored in the USERLOC) directory.
	ShowWorkPeriods = 1	Set the value to 1 to include workperiod numbers in the dump file. Note: Use of these data dumps slows the leveling process dramatically, and can generate very large files. These options are intended only for trouble-shooting.