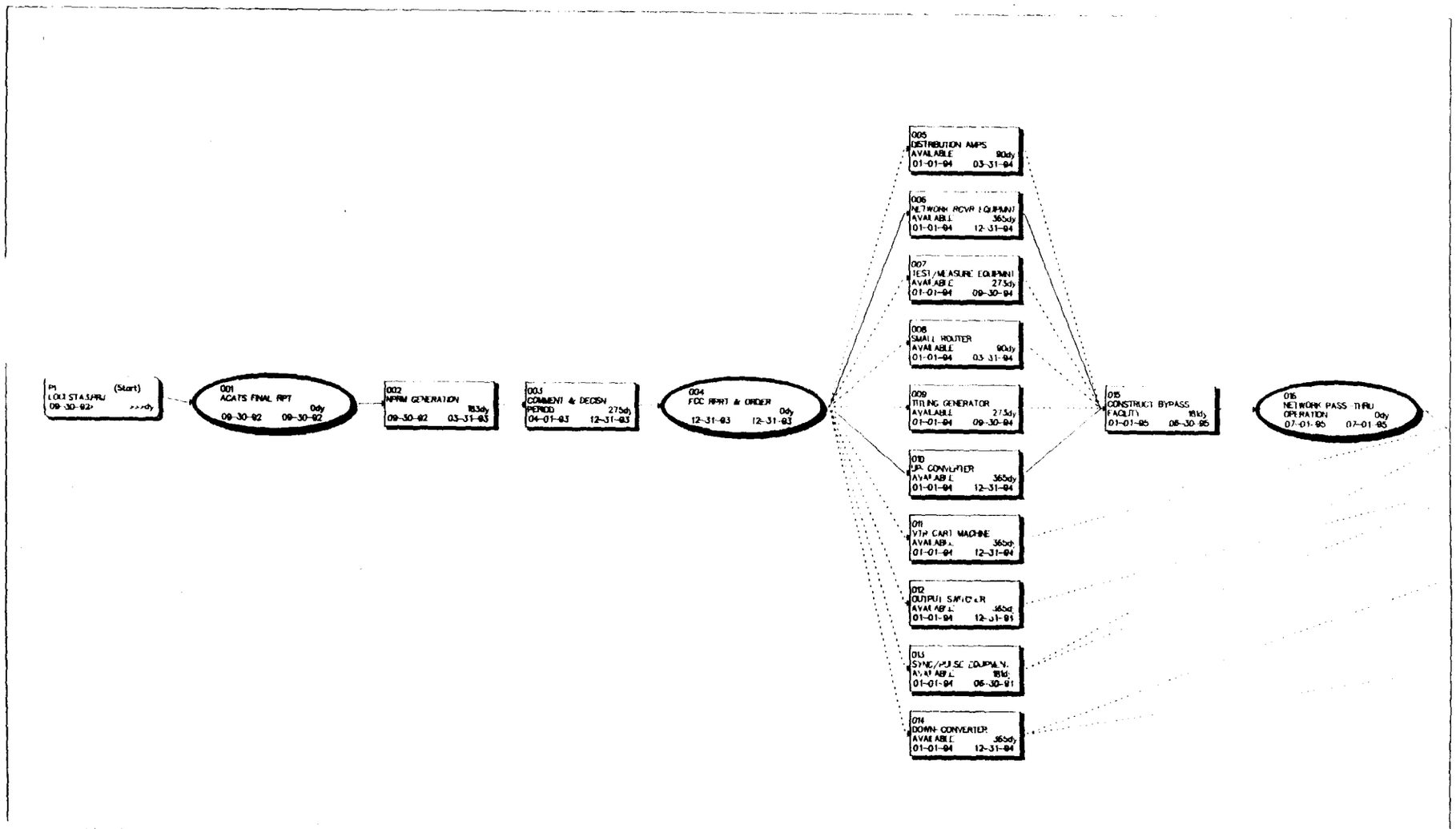
PERT Chart
01-02-92 12:27p

LOCAL STATION FULL HDTV REPLACEMENT - SCENARIO 3

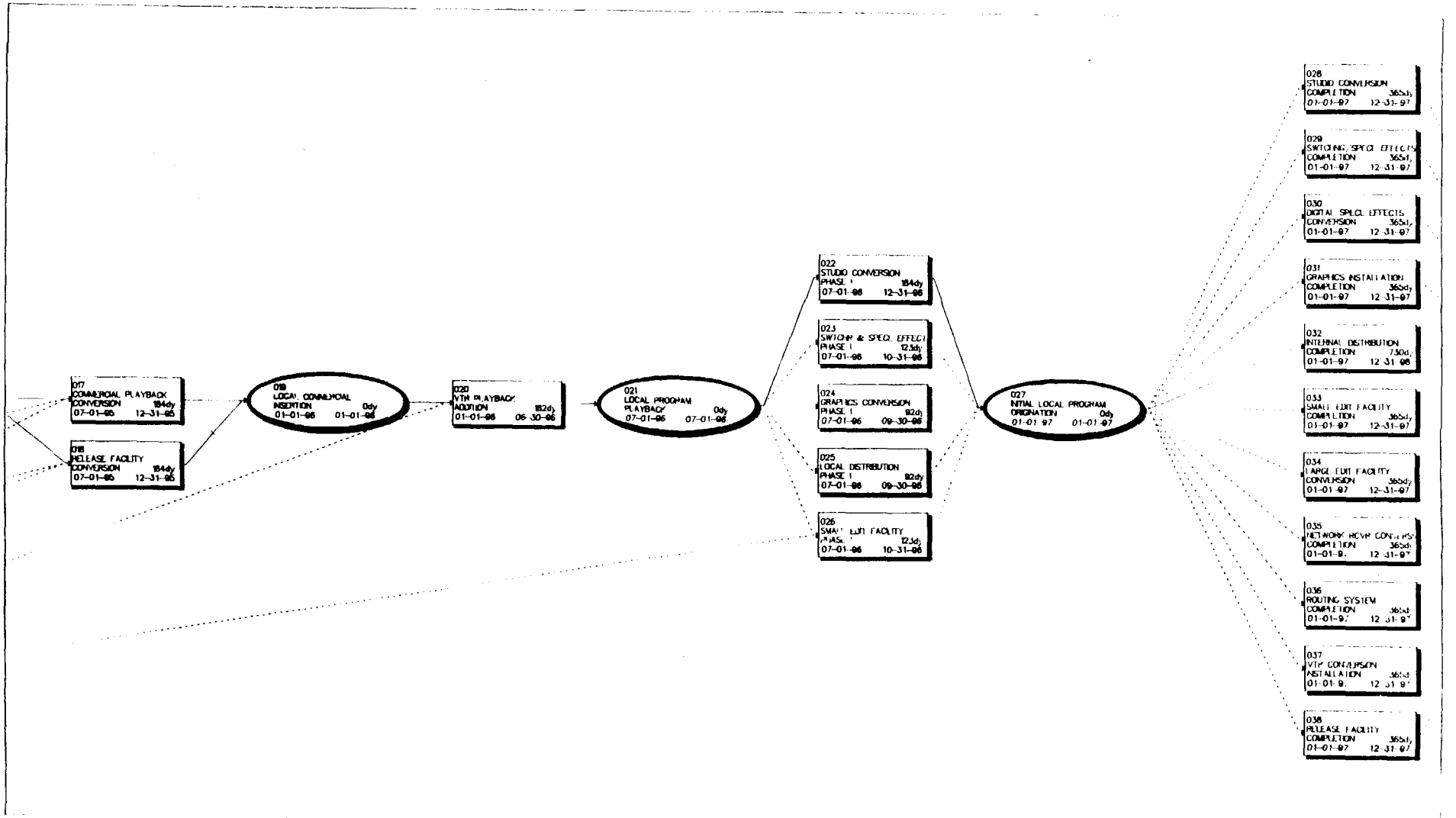
Project: LOCI STA3/HU
Revision: 9



Task box: 001 Crit
Heading box: 001 NonCr
Milestone box:
Subproject box:

Crit line
Noncrit line
Select color
Nonselect color

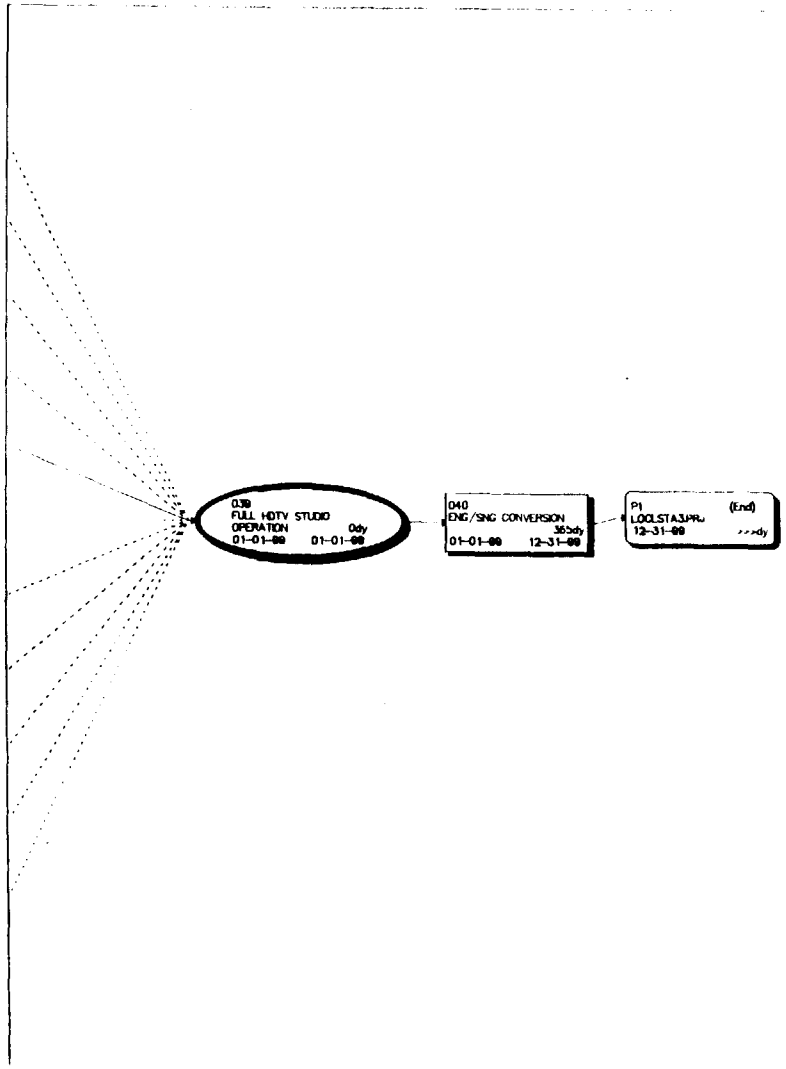
LOCAL STATION FULL HDTV REPLACEMENT – SCENARIO 3



Task box
Heading box
Milestone box
Subproject box

Crit
Noncrit

Crit link
Noncrit link
Select color
Nonselect color



Task box
Heading box
Milestone box
Subproject box

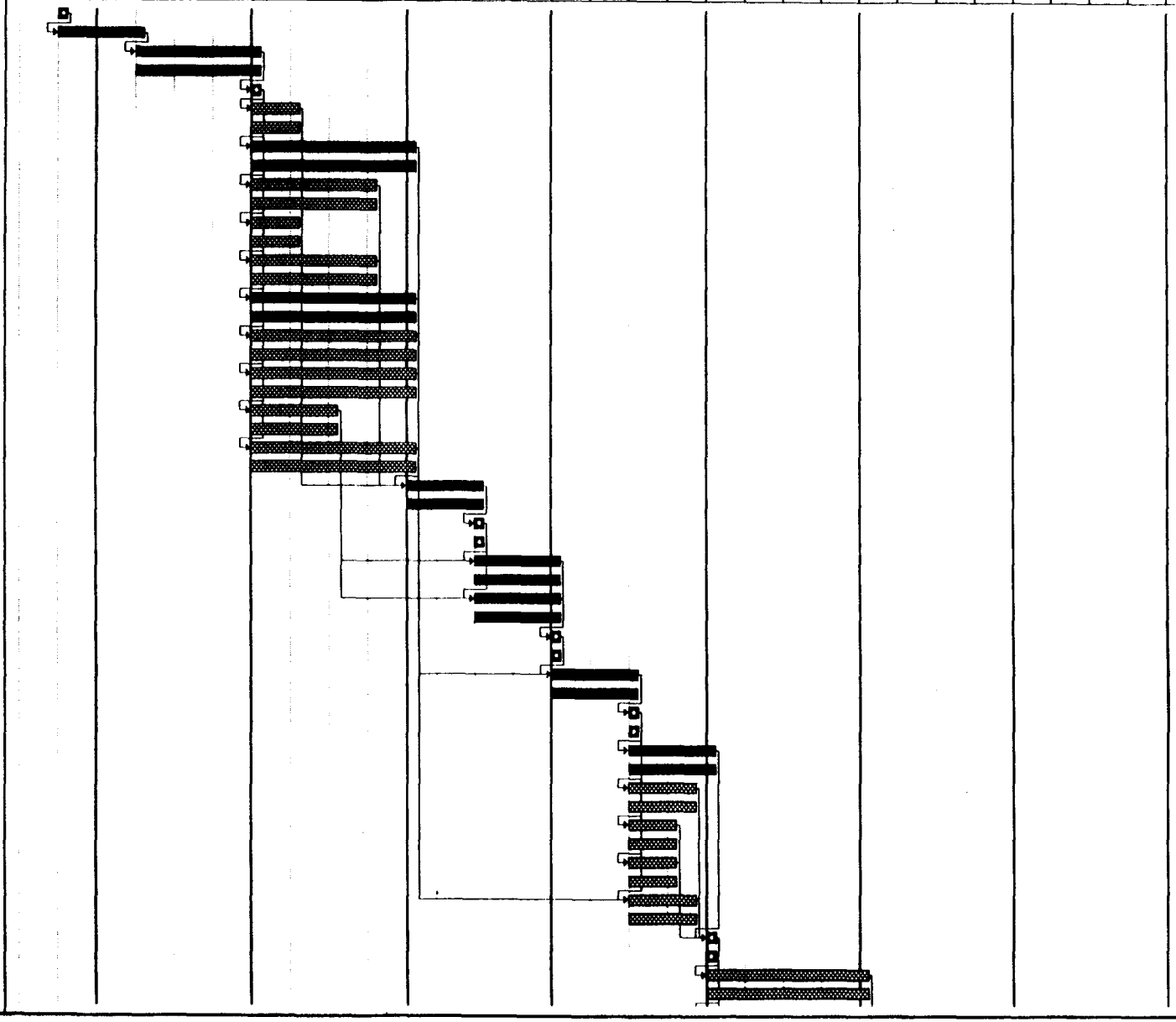
Critical
Noncrit link
Select links
Nonselect links

Task Outline
01-01-92 1:51a

Project: LOCLSTA3.PRJ
Revision: 9

LOCAL STATION: FULL HDTV REPLACEMENT - SCENARIO 3

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATION	183dy
003	COMMENT & DECISN	275dy
003	PERIOD	
004	FCC RPRT & ORDER	0dy
005	DISTRIBUTION AMPS	90dy
005	AVAILABLE	
006	NETWORK RCVR EQUIPMNT	365dy
006	AVAILABLE	
007	TEST/MEASURE EQUIPMNT	273dy
007	AVAILABLE	
008	SMALL ROUTER	90dy
008	AVAILABLE	
009	TITLING GENERATOR	273dy
009	AVAILABLE	
010	UP-CONVERTER	365dy
010	AVAILABLE	
011	VTR CART MACHINE	365dy
011	AVAILABLE	
012	OUTPUT SWITCHER	365dy
012	AVAILABLE	
013	SYNC/PULSE EQUIPMENT	181dy
013	AVAILABLE	
014	DOWN-CONVERTER	365dy
014	AVAILABLE	
015	CONSTRUCT BYPASS	181dy
015	FACILITY	
016	NETWORK PASS-THRU	0dy
016	OPERATION	
017	COMMERCIAL PLAYBACK	184dy
017	CONVERSION	
018	RELEASE FACILITY	184dy
018	CONVERSION	
019	LOCAL COMMERCIAL	0dy
019	INSERTION	
020	VTR PLAYBACK	182dy
020	ADDITION	
021	LOCAL PROGRAM	0dy
021	PLAYBACK	
022	STUDIO CONVERSION	184dy
022	PHASE I	
023	SWTCHR & SPECL EFFECT	123dy
023	PHASE I	
024	GRAPHICS CONVERSION	92dy
024	PHASE I	
025	LOCAL DISTRIBUTION	92dy
025	PHASE I	
026	SMALL EDIT FACILITY	123dy
026	PHASE I	
027	INITIAL LOCAL PROGRAM	0dy
027	ORIGINATION	
028	STUDIO CONVERSION	365dy
028	COMPLETION	



Unassigned Interrupted Noncritical Critical Milestone

LOCAL STATION: FULL HDTV REPLACEMENT - SCENARIO 3

Task ID	Task Name 23 Days Per Column	Est Dur
029	SWTCHNG/SPECL EFFECTS	365dy
029	COMPLETION	
030	DIGITAL SPECL EFFECTS	365dy
030	CONVERSION	
031	GRAPHICS INSTALLATION	365dy
031	COMPLETION	
032	INTERNAL DISTRIBUTION	730dy
032	COMPLETION	
033	SMALL EDIT FACILITY	365dy
033	COMPLETION	
034	LARGE EDIT FACILITY	365dy
034	CONVERSION	
035	NETWORK RCVR CONVERSN	365dy
035	COMPLETION	
036	ROUTING SYSTEM	365dy
036	COMPLETION	
037	VTR CONVERSION	365dy
037	INSTALLATION	
038	RELEASE FACILITY	365dy
038	COMPLETION	
039	FULL HDTV STUDIO	0dy
039	OPERATION	
040	ENG/SNG CONVERSION	365dy

Unassigne Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Network: Widescreen 525/2:1, 16X9 - Scenario 2

General Assumptions

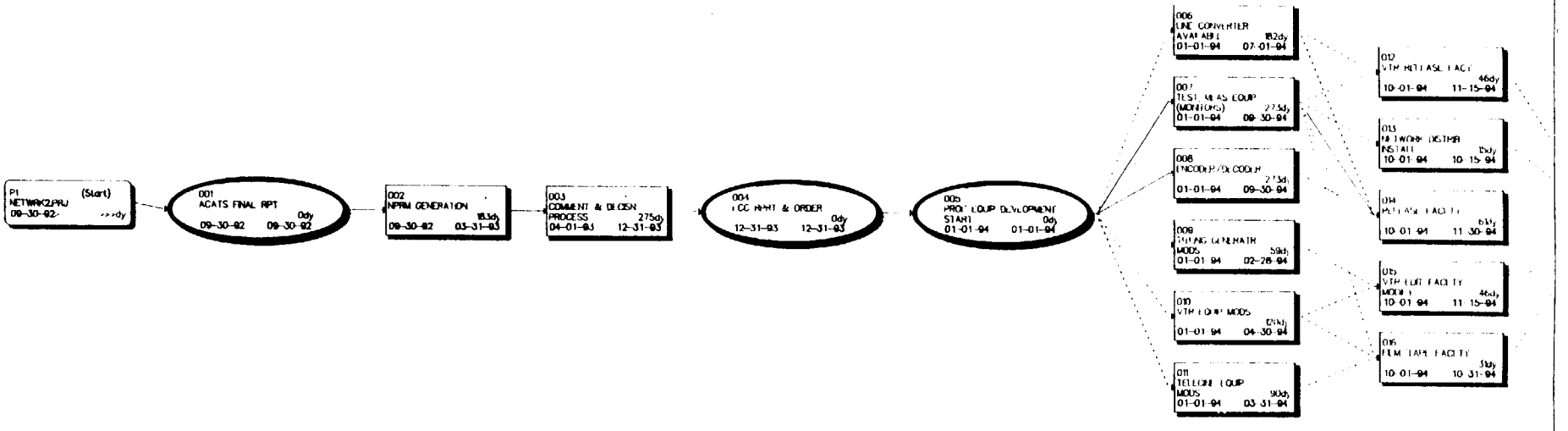
1. Network distribution of HDTV initially on single distribution channel
2. No initial time zone differentiation of HDTV programming
3. Transition has three stages:
   - Initial - Accommodates small amount of programming occasionally
   - Interim - Supports small amount of programming on regular basis
   - Final - Full conversion to Widescreen operation with no NTSC
4. Network has multiple studios and control rooms
5. Network will maintain current level of production for long term
6. Network distribution may be full HDTV or Widescreen 525 during transition
7. Up-Converter required to send Widescreen 525 on HDTV distribution channel
8. Line converter required to send Widescreen 525 on NTSC distribution channels
9. Widescreen 525 can serve as low cost input for all HDTV distribution systems
10. Performance will be less than HTDV but far superior to NTSC for up-conversion
11. Widescreen equipment can also operate in 4:3 aspect ratio on switchable basis
12. Widescreen 525 can also serve as input for EDTV systems
13. Widescreen 525 encompasses several modes of operation:

Digital components	Digital composite
Analog components	Analog composite

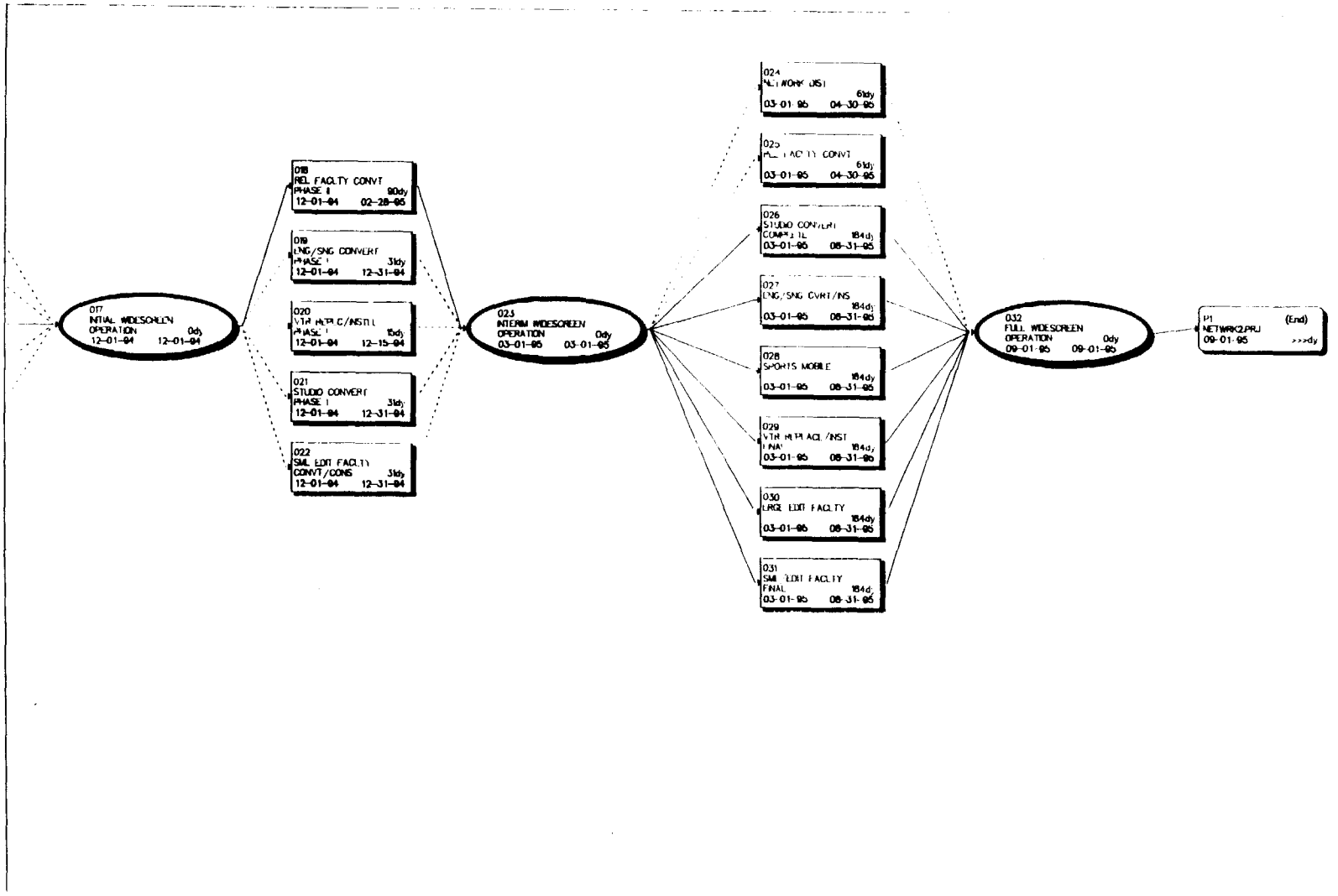
14. Digital components at 18 MHz sampling yield best up-conversion performance
15. Digital systems operate with serial digital interconnection
16. Digital systems require replacement of most existing equipment
17. Analog systems allow combination of modification & replacement
18. Space is available for installation of new/additional equipment (No walls, HVAC, lighting, consoles, racks, power required)
19. Mobile unit required for sports coverage - other production with rentals

Notes

1. Times given in associated PERT and Gantt charts are for sake of example only
2. Times given in PERT and Gantt charts will be adjusted based on manpower resource levelling
3. Tasks shown in parallel at various stages are to indicate only relative location in overall transition
4. Tasks shown in parallel may not occur in parallel once manpower availability is taken into account



Line box
Loading box
Milestone box
Subproject box
Critical line
Noncrit line
Select color
Nonselect color



Task box
Loading box
Milestone box
Subproject box

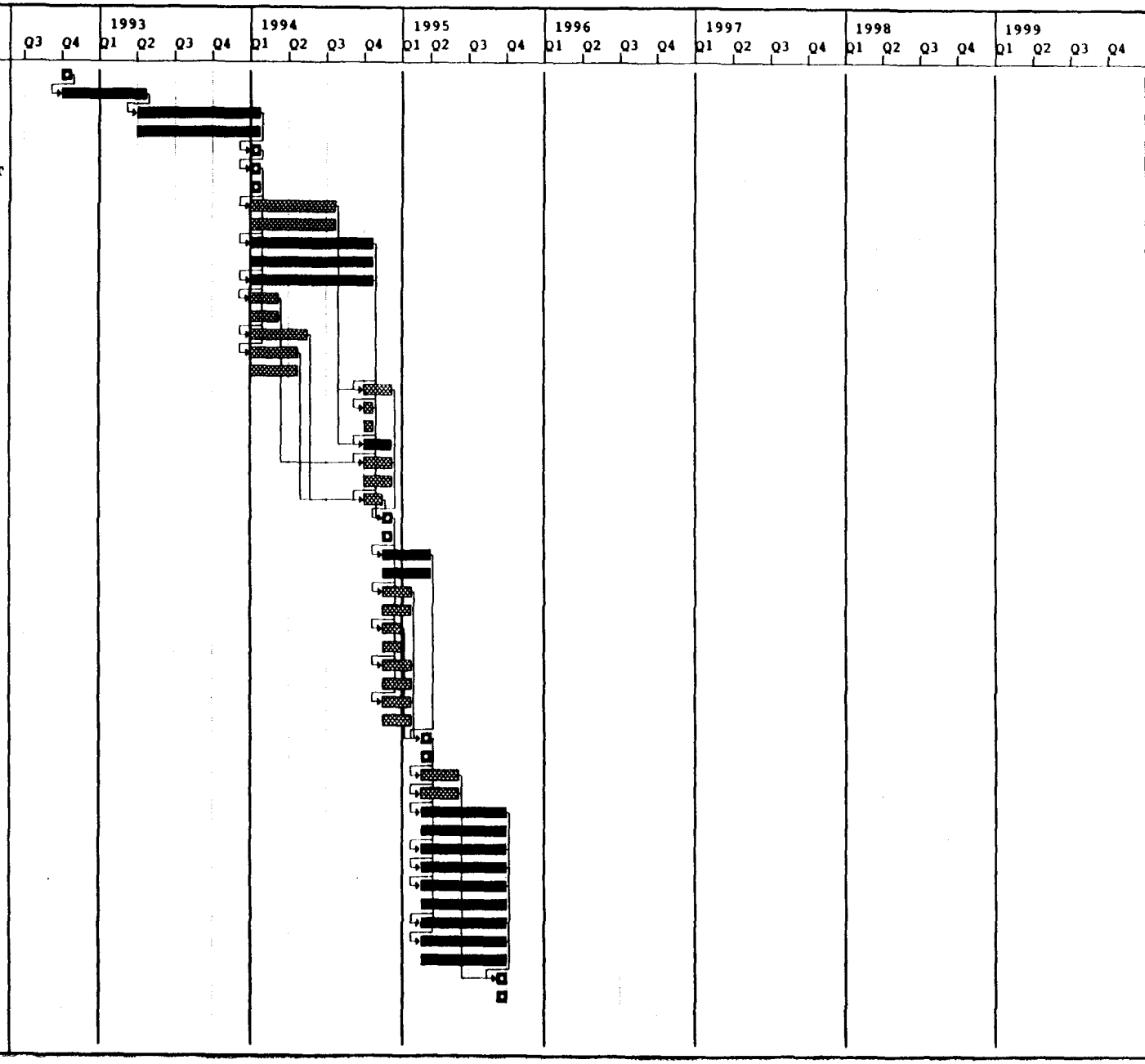
Critical line
Noncrit line
Select color
Nonselect color

Task Outline
01-01-92 2:02a

Project: NETWRK2.PRJ
Revision: 8

NETWORK: WIDESCREEN 525/2:1, 16:9 - SCENARIO 2

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATION	183dy
003	COMMENT & DECISN	275dy
003	PROCESS	
004	FCC RPRT & ORDER	0dy
005	PROF EQUIP DEVLOPMENT	0dy
005	START	
006	LINE CONVERTER	182dy
006	AVAILABLE	
007	TEST/MEAS EQUIP	273dy
007	(MONITORS)	
008	ENCODER/DECODER	273dy
009	TITLING GENERATR	59dy
009	MODS	
010	VTR EQUIP MODS	120dy
011	TELECINE EQUIP	90dy
011	MODS	
012	VTR RELEASE FACY	46dy
013	NETWORK DISTRIB	15dy
013	INSTALL	
014	RELEASE FACLTY	61dy
015	VTR EDIT FACLTY	46dy
015	MODIFY	
016	FILM/TAPE FACLTY	31dy
017	INITIAL WIDESCREEN	0dy
017	OPERATION	
018	REL FACLTY CONVT	90dy
018	PHASE II	
019	ENG/SNG CONVERT	31dy
019	PHASE I	
020	VTR REPLC/INSTLL	15dy
020	PHASE I	
021	STUDIO CONVERT	31dy
021	PHASE I	
022	SML EDIT FACLTY	31dy
022	CONVT/CONS	
023	INTERIM WIDESCREEN	0dy
023	OPERATION	
024	NETWORK DIST	61dy
025	REL FACLTY CONVT	61dy
026	STUDIO CONVERT	184dy
026	COMPLETE	
027	ENG/SNG CVRT/INS	184dy
028	SPORTS MOBILE	184dy
029	VTR REPLACE/INST	184dy
029	FINAL	
030	LRGE EDIT FACLTY	184dy
031	SML/EDIT FACLTY	184dy
031	FINAL	
032	FULL WIDESCREEN	0dy
032	OPERATION	



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Network: Full HDTV Replacement - Scenario 3

General Assumptions

1. Network distribution of HDTV initially on single distribution channel
2. No initial time zone differentiation of HDTV programming
3. Transition has three stages:
   Initial - Accommodates small amount of programming occasionally
   Interim - Supports small amount of programming on regular basis
   Final - Full conversion to HDTV operation with no NTSC
4. Network has multiple studios and control rooms
5. Network will maintain current level of production for long term
6. Test & Measuring Equipment includes monitoring equipment
7. Distribution Amps design insensitive to raster format
   (Only bandwidth is important)
8. Up-Converters required to send NTSC on HDTV distribution channels
9. Up-converter required to incorporate NTSC material from library into HDTV programs
10. Down-Converter required for HDTV programming on NTSC distribution channels
11. Early tasks burdened by learning process for new technology
12. Space is available for installation of new/additional equipment
    (No walls, HVAC, lighting, consoles, racks, power required)
13. HDTV studio systems operate with serial digital interconnection
14. Mobile unit required for sports coverage - other field production with rentals

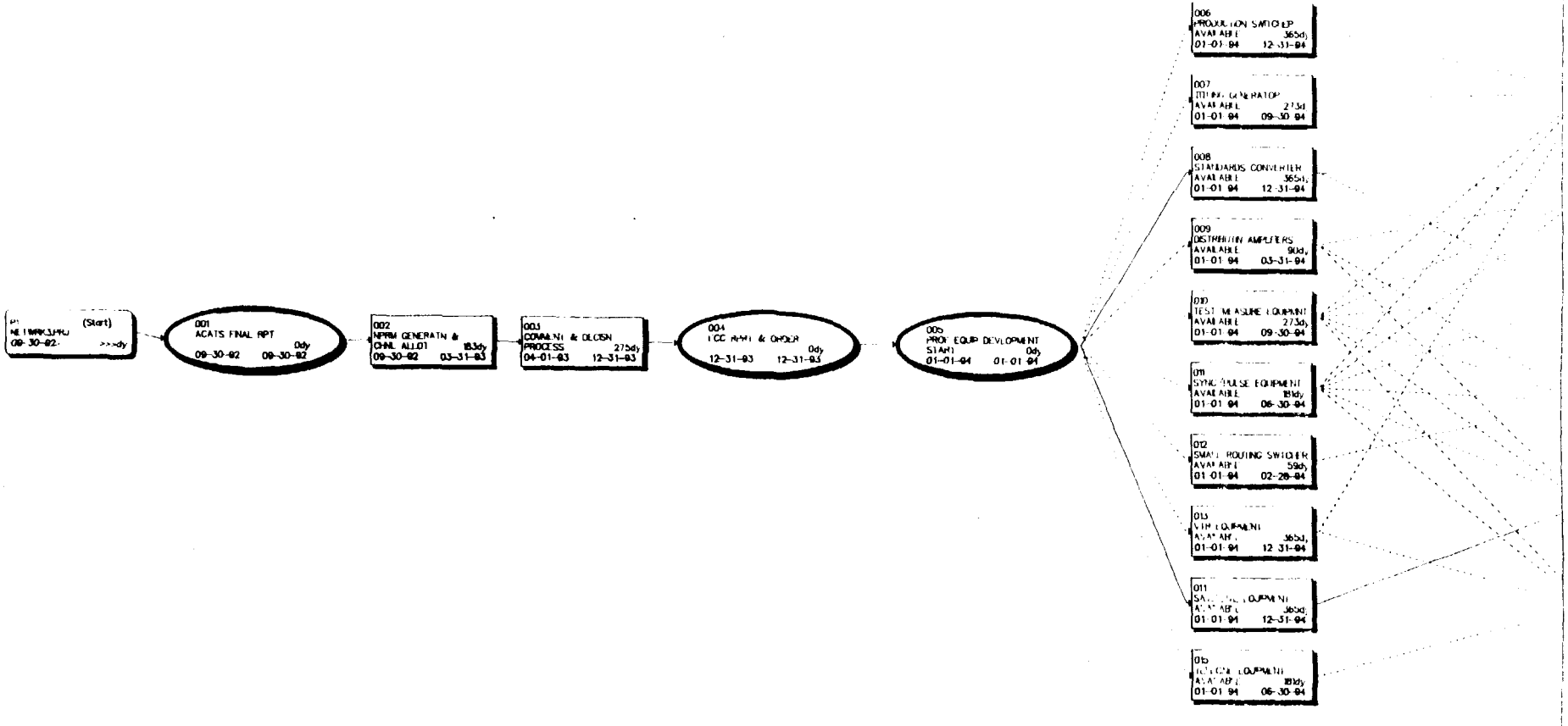
Notes

1. Times given in associated PERT and Gantt charts are for sake of example only
2. Times given in PERT and Gantt charts will be adjusted based on manpower resource levelling
3. Tasks shown in parallel at various stages are to indicate only relative location in overall transition
4. Tasks shown in parallel may not occur in parallel once manpower availability is taken into account

PERT Chart
01-02-92 1:50p

NETWORK FULL HDTV REPLACEMENT - SCENARIO 3

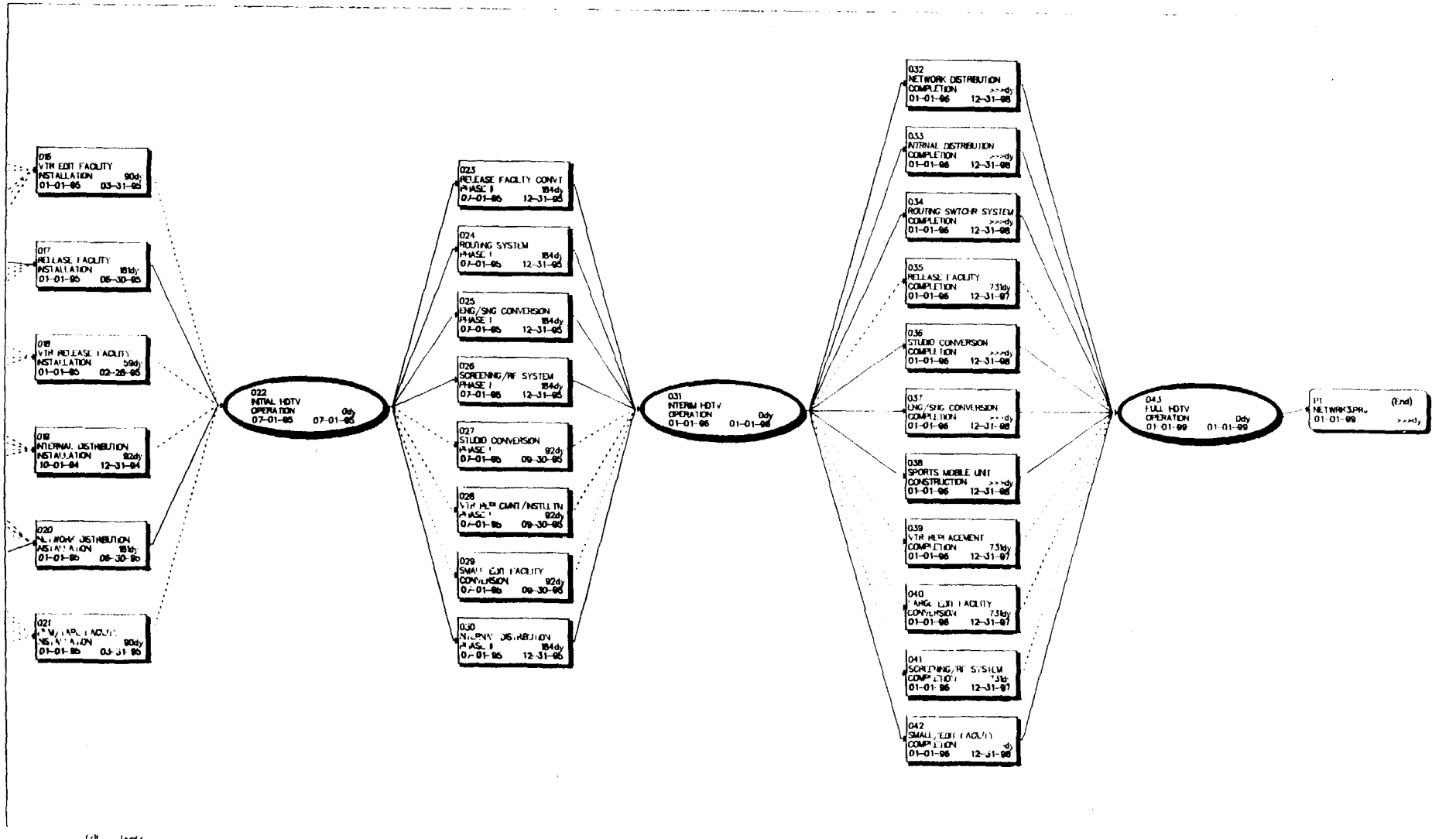
Project NETWRK3FRU
Revision 9



Year box
Existing box
Milestone box
Subproject box

Critical line
Network line
Select color
Nonselect color

NETWORK FULL HDTV REPLACEMENT - SCENARIO 3



Task box
Heading box
Milestone box
Subproject box

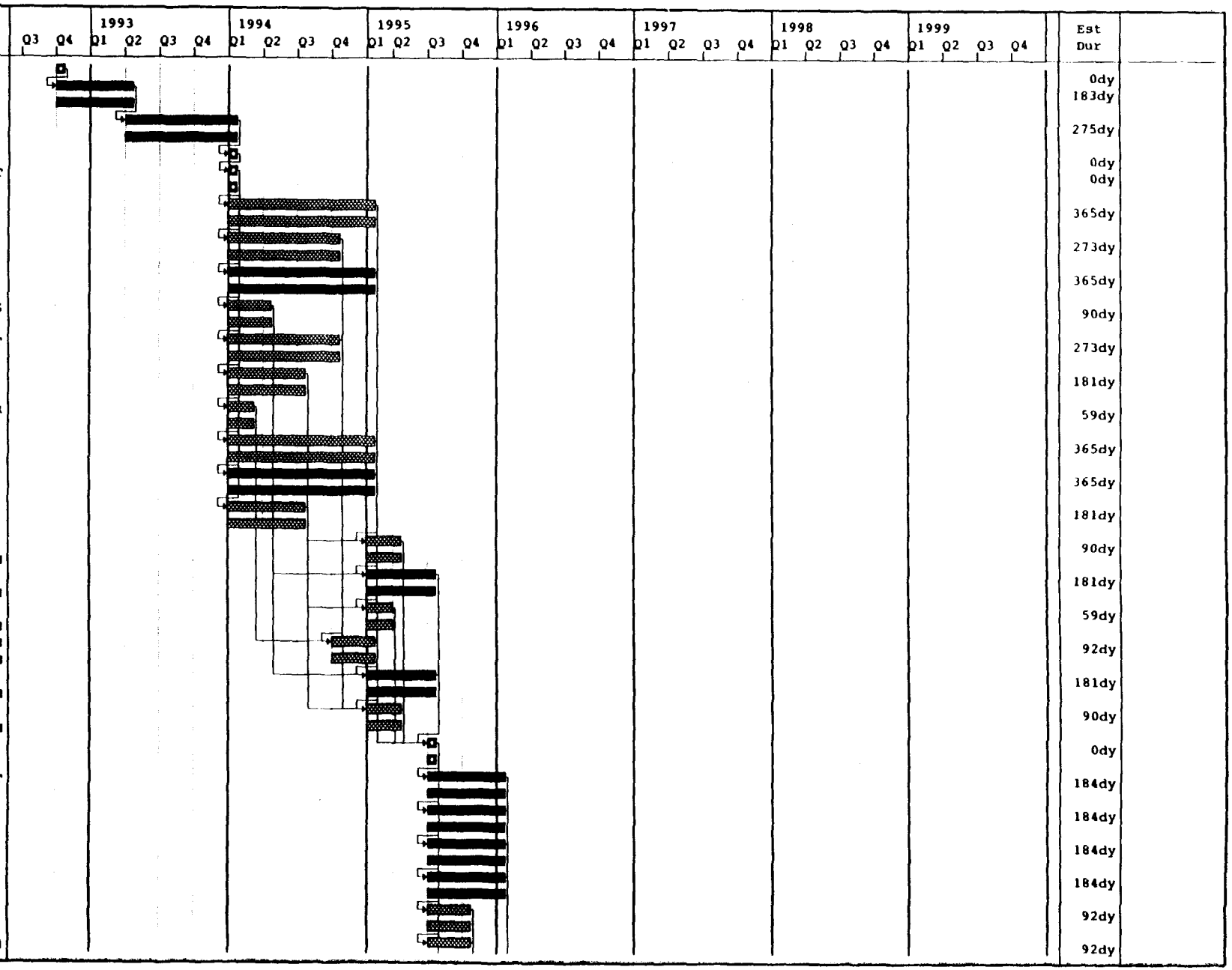
Grid line
Noncrit line
Select color
Nonselect color

Task Outline
01-01-92 2:31a

Project: NETWRK3.PRJ
Revision: 9

NETWORK: FULL HDTV REPLACEMENT - SCENARIO 3

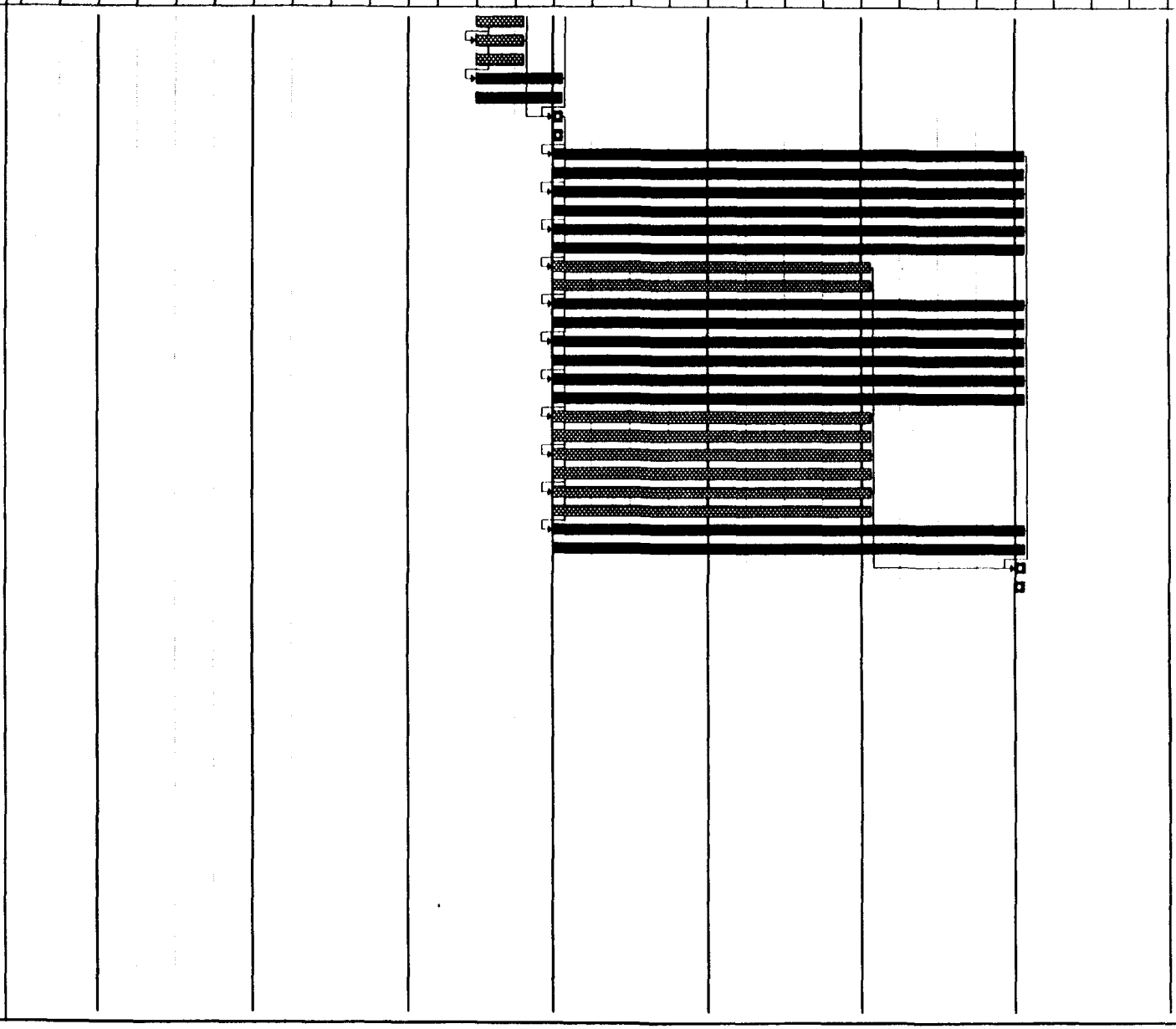
Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATN &	183dy
002	CHNL ALLOT	
003	COMMENT & DECISN	275dy
003	PROCESS	
004	FCC RPRT & ORDER	0dy
005	PROF EQUIP DEVLOPMENT	0dy
005	START	
006	PRODUCTION SWITCHER	365dy
006	AVAILABLE	
007	TITLING GENERATOR	273dy
007	AVAILABLE	
008	STANDARDS CONVERTER	365dy
008	AVAILABLE	
009	DISTRIBUTIN AMPLFIERS	90dy
009	AVAILABLE	
010	TEST/MEASURE EQUIPMNT	273dy
010	AVAILABLE	
011	SYNC/PULSE EQUIPMENT	181dy
011	AVAILABLE	
012	SMALL ROUTING SWTCHER	59dy
012	AVAILABLE	
013	VTR EQUIPMENT	365dy
013	AVAILABLE	
014	SATELLITE EQUIPMENT	365dy
014	AVAILABLE	
015	TELECINE EQUIPMENT	181dy
015	AVAILABLE	
016	VTR EDIT FACILITY	90dy
016	INSTALLATION	
017	RELEASE FACILITY	181dy
017	INSTALLATION	
018	VTR RELEASE FACILITY	59dy
018	INSTALLATION	
019	INTERNAL DISTRIBUTION	92dy
019	INSTALLATION	
020	NETWORK DISTRIBUTION	181dy
020	INSTALLATION	
021	FILM/TAPE FACILITY	90dy
021	INSTALLATION	
022	INITIAL HDTV	0dy
022	OPERATION	
023	RELEASE FACILTY CONVT	184dy
023	PHASE II	
024	ROUTING SYSTEM	184dy
024	PHASE I	
025	ENG/SNG CONVERSION	184dy
025	PHASE I	
026	SCREENING/RF SYSTEM	184dy
026	PHASE I	
027	STUDIO CONVERSION	92dy
027	PHASE I	
028	VTR REPLCMNT/INSTLLTN	92dy



Unassigned Interrupted Noncritical Critical Milestone

NETWORK: FULL HDTV REPLACEMENT - SCENARIO 3

Task ID	Task Name 23 Days Per Column	Est Dur
028	PHASE I	
029	SMALL EDIT FACILITY	92dy
029	CONVERSION	
030	INTERNAL DISTRIBUTION	184dy
030	PHASE II	
031	INTERIM HDTV	0dy
031	OPERATION	
032	NETWORK DISTRIBUTION	1096dy
032	COMPLETION	
033	INTRNAL DISTRIBUTION	1096dy
033	COMPLETION	
034	ROUTING SWTCHR SYSTEM	1096dy
034	COMPLETION	
035	RELEASE FACILITY	731dy
035	COMPLETION	
036	STUDIO CONVERSION	1096dy
036	COMPLETION	
037	ENG/SNG CONVERSION	1096dy
037	COMPLETION	
038	SPORTS MOBILE UNIT	1096dy
038	CONSTRUCTION	
039	VTR REPLACEMENT	731dy
039	COMPLETION	
040	LARGE EDIT FACILITY	731dy
040	CONVERSION	
041	SCREENING/RF SYSTEM	731dy
041	COMPLETION	
042	SMALL/EDIT FACILITY	1096dy
042	COMPLETION	
043	FULL HDTV	0dy
043	OPERATION	



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Production/Post Production: Widescreen 525/2:1, 16X9 - Scenario 2

General Assumptions

1. Network distribution of HDTV initially on single distribution channel
2. No initial time zone differentiation of HDTV programming
3. Transition has three stages:
   - Initial - Accommodates small amount of programming occasionally
   - Interim - Supports small amount of programming on regular basis
   - Final - Full conversion to Widescreen operation with no NTSC
4. Network has multiple studios and control rooms
5. Network will maintain current level of production for long term
6. Network distribution may be full HDTV or Widescreen 525 during transition
7. Up-Converter required to send Widescreen 525 on HDTV distribution channel
8. Line converter required to send Widescreen 525 on NTSC distribution channels
9. Widescreen 525 can serve as low cost input for all HDTV distribution systems
10. Performance will be less than HTDV but far superior to NTSC for up-conversion
11. Widescreen equipment can also operate in 4:3 aspect ratio on switchable basis
12. Widescreen 525 can also serve as input for EDTV systems
13. Widescreen 525 encompasses several modes of operation:

Digital components	Digital composite
Analog components	Analog composite

14. Digital components at 18 MHz sampling yield best up-conversion performance
15. Digital systems operate with serial digital interconnection
16. Digital systems require replacement of most existing equipment
17. Analog systems allow combination of modification & replacement
18. Space is available for installation of new/additional equipment (No walls, HVAC, lighting, consoles, racks, power required)
19. Mobile unit required for sports coverage - other production with rentals

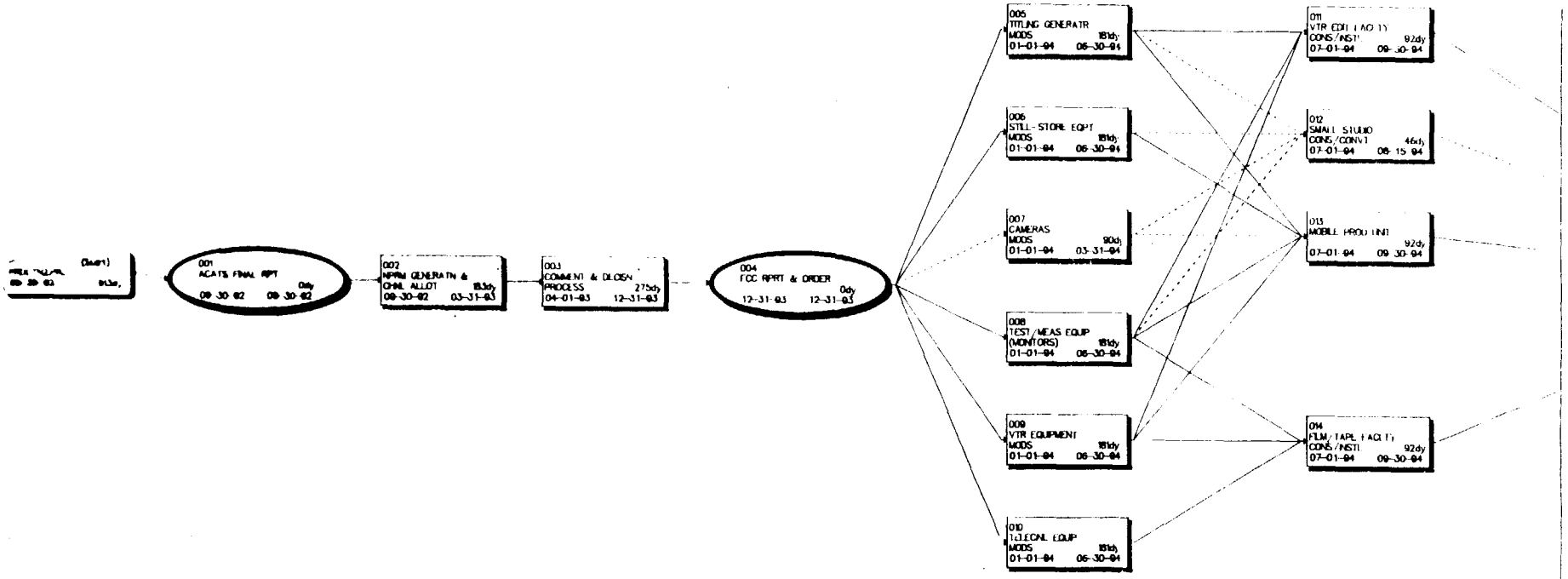
Notes

1. Times given in associated PERT and Gantt charts are for sake of example only
2. Times given in PERT and Gantt charts will be adjusted based on manpower resource levelling
3. Tasks shown in parallel at various stages are to indicate only relative location in overall transition
4. Tasks shown in parallel may not occur in parallel once manpower availability is taken into account

PERT Chart
01-02-92 2:33p

PRODUCTION/POST. WIDESCREEN 525/2:1 16:9 - SCENARIO 2

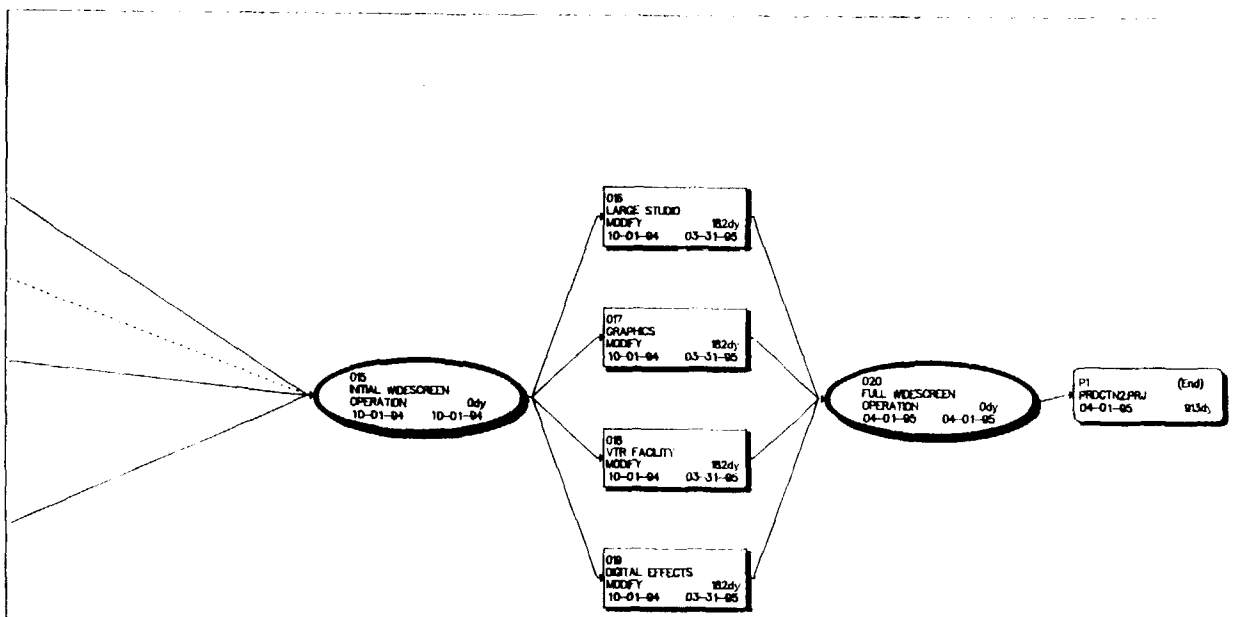
Project: PROJECT2PRJ
Revision: 4



Task box: Crit 0002 Non-Crit 0002
Heading box
Milestone box
Subproject box

Crit line
Noncrit line
Select conn
Nonselect conn

PRODUCTION/POST: WIDESCREEN 525/2:1 16:9 - SCENARIO 2



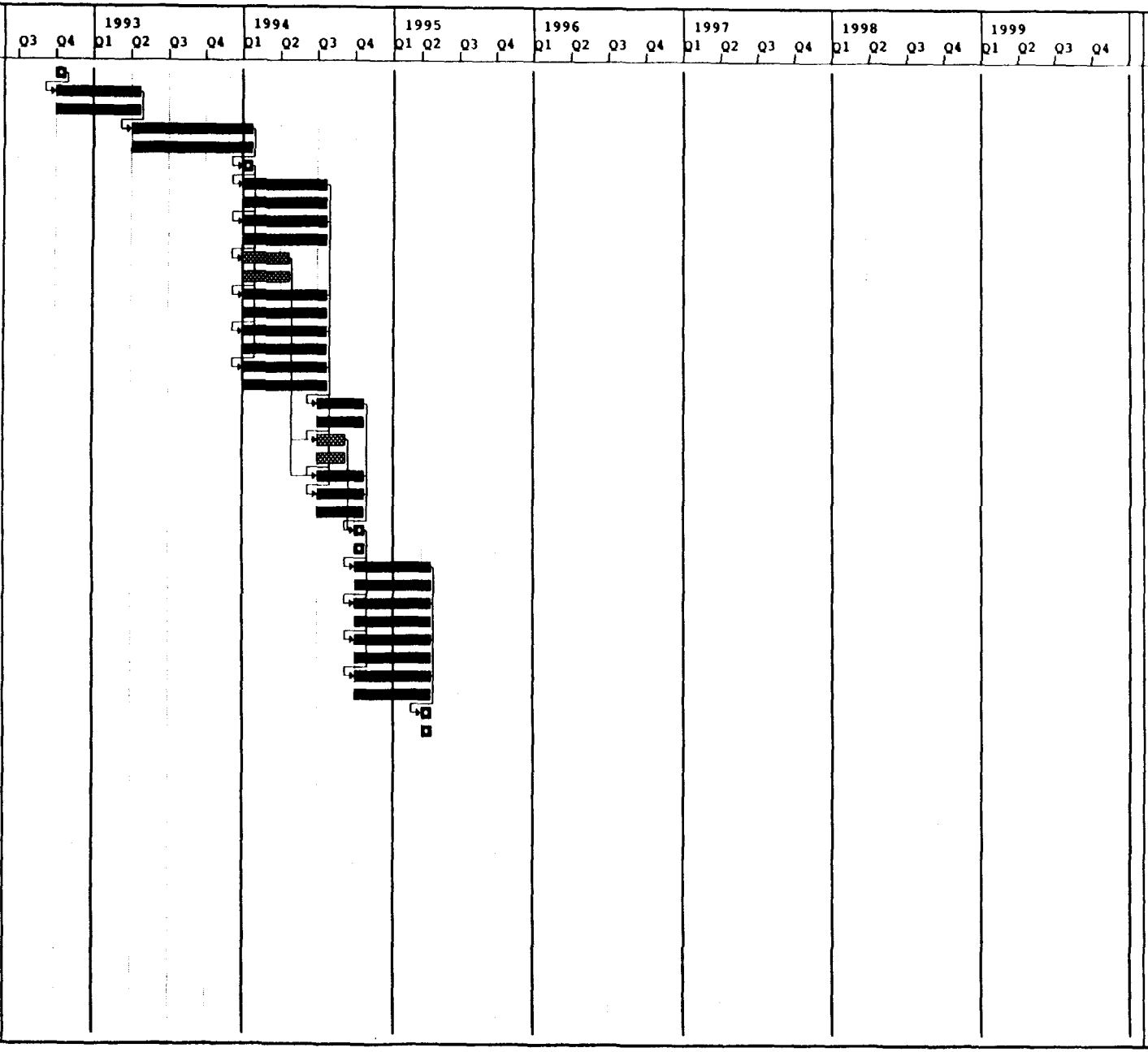
Task box
Loading box
Milestone box
Subproject box
Crit
Noncrit
Crit line
Noncrit line
Select color
Nonselect color

Task Outline
01-01-92 2:39a

Project: PRDCTN2.PRJ
Revision: 4

PRODUCTION/POST: WIDESCREEN 525/2:1, 16:9 - SCENARIO 2

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATN &	183dy
002	CHNL ALLOT	
003	COMMENT & DECISN	275dy
003	PROCESS	
004	FCC RPRT & ORDER	0dy
005	TITLING GENERATR	181dy
005	MODS	
006	STILL-STORE EQPT	181dy
006	MODS	
007	CAMERAS	90dy
007	MODS	
008	TEST/MEAS EQUIP	181dy
008	(MONITORS)	
009	VTR EQUIPMENT	181dy
009	MODS	
010	TELECINE EQUIP	181dy
010	MODS	
011	VTR EDIT FACLTY	92dy
011	CONS/INSTL	
012	SMALL STUDIO	46dy
012	CONS/CONVT	
013	MOBILE PROD UNIT	92dy
014	FILM/TAPE FACLTY	92dy
014	CONS/INSTL	
015	INITIAL WIDESCREEN	0dy
015	OPERATION	
016	LARGE STUDIO	182dy
016	MODIFY	
017	GRAPHICS	182dy
017	MODIFY	
018	VTR FACILITY	182dy
018	MODIFY	
019	DIGITAL EFFECTS	182dy
019	MODIFY	
020	FULL WIDESCREEN	0dy
020	OPERATION	



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Production/Post Production: Full HDTV Replacement - Scenario 3

General Assumptions

1. Networks and Producers will require much initial production done out-of-house
2. Networks, studios, & stations will require mobile units for control room substitution during fixed control room renovation
3. Transition has three stages:
   Initial - Accommodates film scanning & low production value studio work
   Interim - Provides high production value for moderate amount of work
   Final - Full conversion to HDTV operation with little NTSC
4. Production house has multiple studios and control rooms
5. Production house will maintain current work level for long term
6. Customer requirements may be full HDTV or Widescreen 525 during transition
7. Down-Converter required to provide HDTV to Widescreen 525 & NTSC customers
8. Up-Converter required to incorporate NTSC material into HDTV production
9. Test & Measuring Equipment includes monitoring equipment
10. Distribution Amps design insensitive to raster format
    (Only bandwidth is important)
11. Early tasks burdened by learning process for new technology
12. Space is available for installation of new/additional equipment
    (No walls, HVAC, lighting, consoles, racks, power required)
13. HDTV studio systems operate with serial digital interconnection
14. Mobile unit required for both field production & studio control room replacement

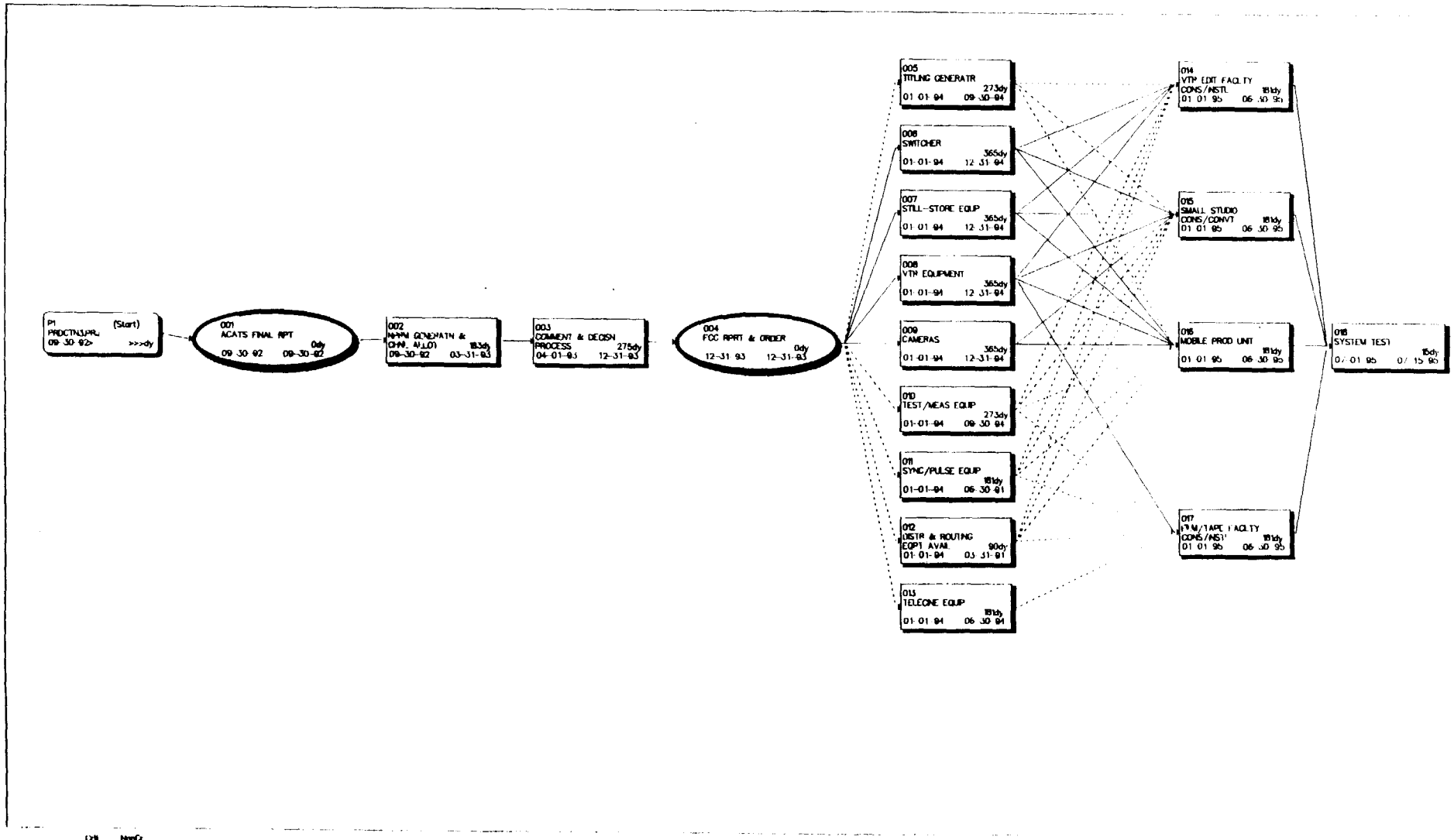
Notes

1. Times given in associated PERT and Gantt charts are for sake of example only
2. Times given in PERT and Gantt charts will be adjusted based on manpower resource levelling
3. Tasks shown in parallel at various stages are to indicate only relative location in overall transition
4. Tasks shown in parallel may not occur in parallel once manpower availability is taken into account

PERT Chart
01-02-92 2:59p

PRODUCTION/POST: FULL HDTV REPLACEMENT – SCENARIO 3

Project: PRDCTN3.PRJ
Revision: 3

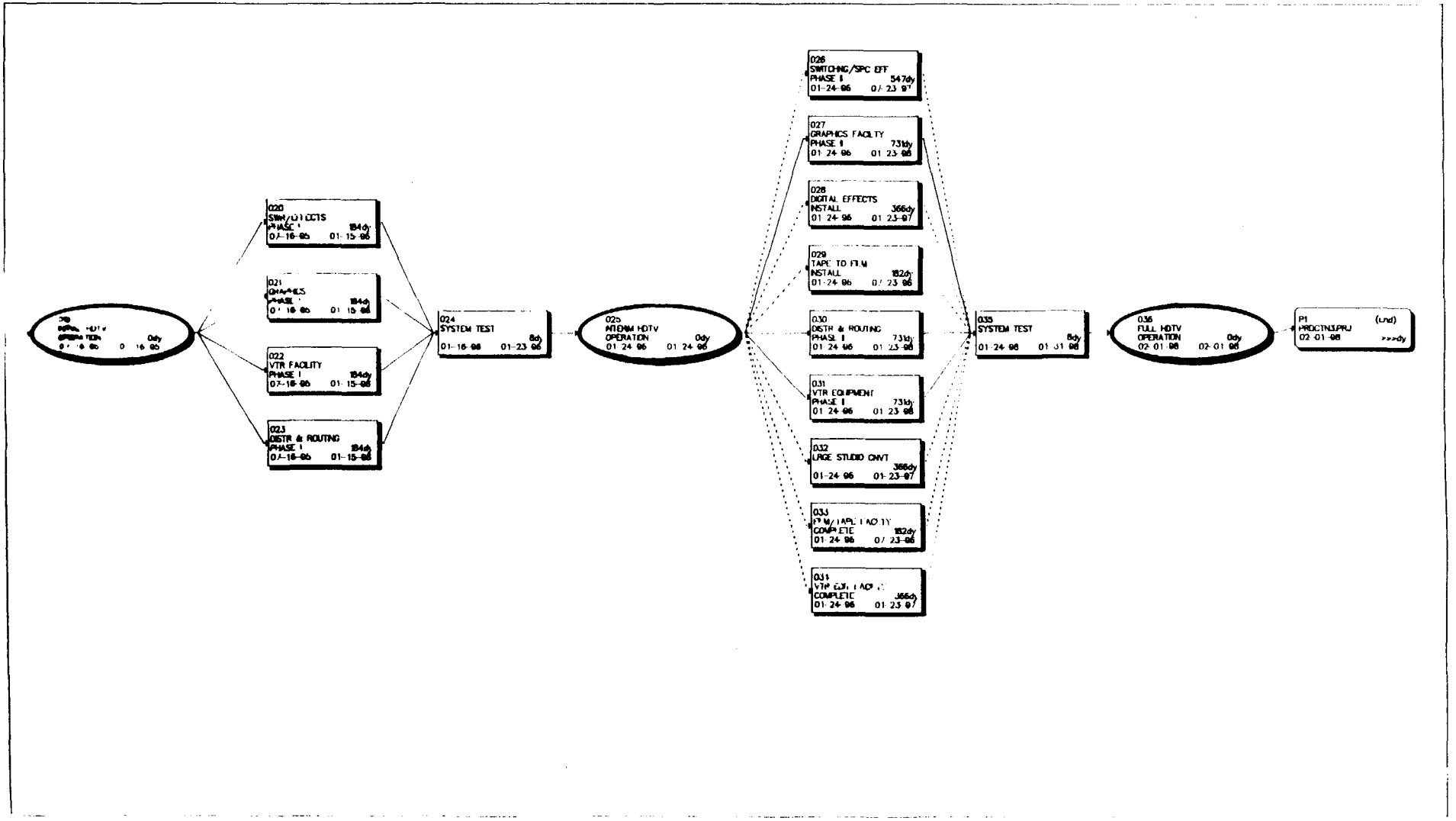


Task box
Heading box
Milestone box
Subproject box

Crit.
Non-Cr.

Crit. link
Noncrit. link
Select color
Nonselect color

PRODUCTION/POST: FULL HDTV REPLACEMENT – SCENARIO 3



Task box
Heading box
Milestone box
Subproject box

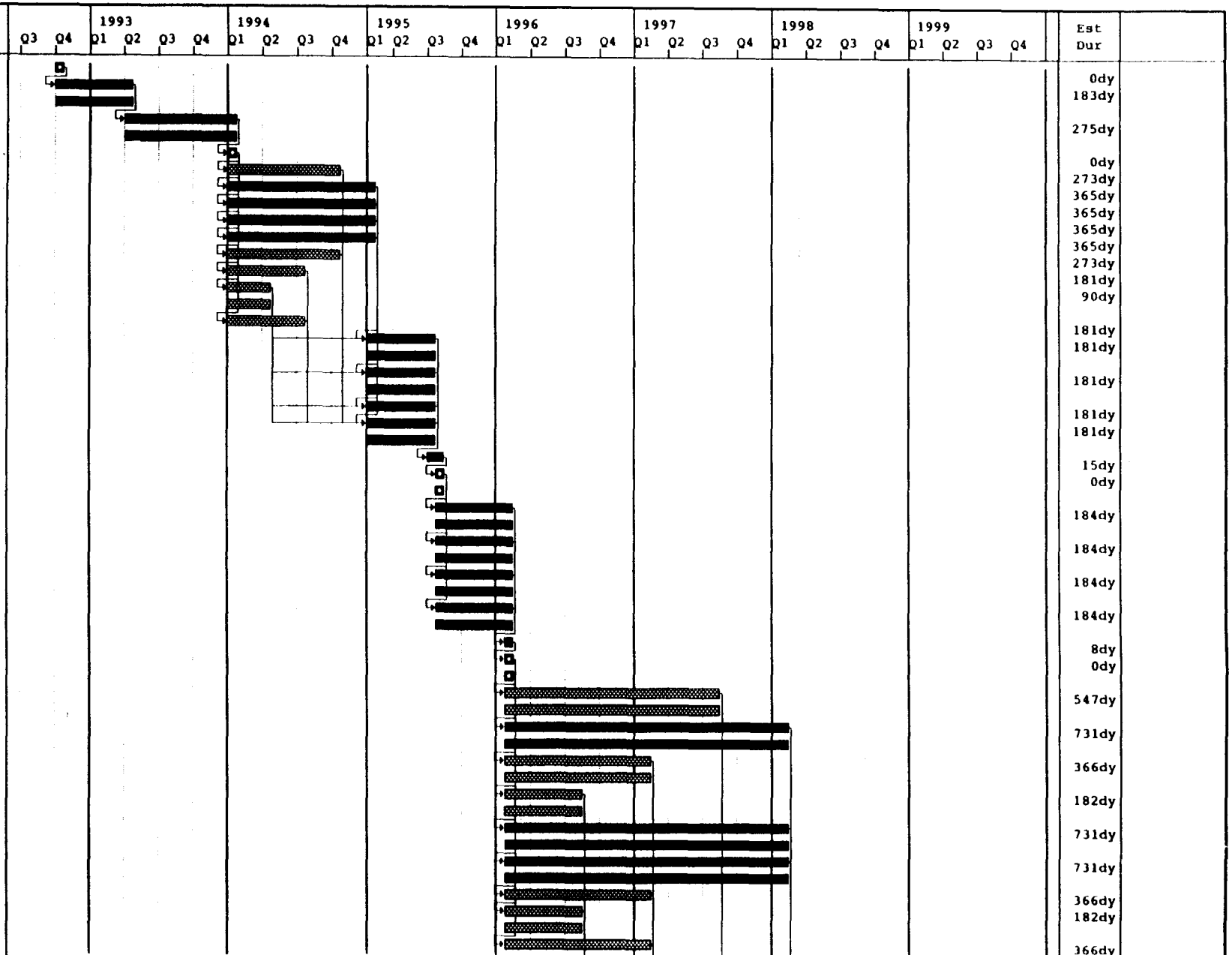
Crit link
Noncrit link
Select color
Nonselect color

Task Outline
01-01-92 2:45a

Project: PRDCTN3.PRJ
Revision: 3

PRODUCTION/POST: FULL HDTV REPLACEMENT - SCENARIO 3

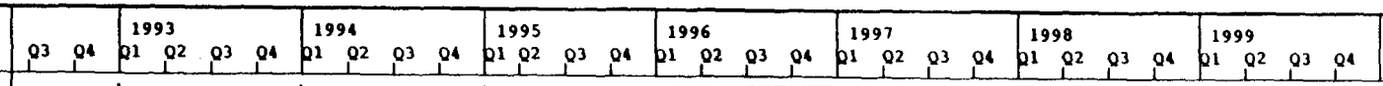
Task ID	Task Name (23 Days Per Column)	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATN &	183dy
002	CHNL ALLOT	
003	COMMENT & DECISN	275dy
003	PROCESS	
004	FCC RPRT & ORDER	0dy
005	TITLING GENERATR	273dy
006	SWITCHER	365dy
007	STILL-STORE EQUP	365dy
008	VTR EQUIPMENT	365dy
009	CAMERAS	365dy
010	TEST/MEAS EQUIP	273dy
011	SYNC/PULSE EQUIP	181dy
012	DISTR & ROUTING	90dy
012	EQPT AVAIL	
013	TELECINE EQUIP	181dy
014	VTR EDIT FACLTY	181dy
014	CONS/INSTL	
015	SMALL STUDIO	181dy
015	CONS/CONVT	
016	MOBILE PROD UNIT	181dy
017	FILM/TAPE FACLTY	181dy
017	CONS/INSTL	
018	SYSTEM TEST	15dy
019	INITIAL HDTV	0dy
019	OPERATION	
020	SWR/EFFECTS	184dy
020	PHASE I	
021	GRAPHICS	184dy
021	PHASE I	
022	VTR FACILITY	184dy
022	PHASE I	
023	DISTR & ROUTING	184dy
023	PHASE I	
024	SYSTEM TEST	8dy
025	INTERIM HDTV	0dy
025	OPERATION	
026	SWITCHNG/SPC EFF	547dy
026	PHASE II	
027	GRAPHICS FACILTY	731dy
027	PHASE II	
028	DIGITAL EFFECTS	366dy
028	INSTALL	
029	TAPE TO FILM	182dy
029	INSTALL	
030	DISTR & ROUTING	731dy
030	PHASE II	
031	VTR EQUIPMENT	731dy
031	PHASE II	
032	LRGE STUDIO CNVT	366dy
033	FILM/TAPE FACLTY	182dy
033	COMPLETE	
034	VTR EDIT FACILTY	366dy



Unassigned Interrupted Noncritical Critical Milestone

PRODUCTION/POST: FULL HDTV REPLACEMENT - SCENARIO 3

Task ID	Task Name 23 Days Per Column	Est Dur
034	COMPLETE	
035	SYSTEM TEST	8dy
036	FULL HDTV	0dy
036	OPERATION	



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Transmitter: Single Channel Compatible - Scenario 1

General Assumptions

1. System approval occurs at time of FCC Report & Order establishing HDTV service
2. No litigation impedes inauguration of service
3. No FCC construction permit required
4. FCC approval required before program transmission
5. No local governmental approvals required
6. Transmitter building has space for additional hardware required

Specific Assumptions

Milestone 1 - Advisory Committee Final Report

A. Assumptions
1. Advisory Committee completes final report on current schedule
2. Advisory Committee report recommends compatible system as option
3. No litigation that impedes process

Task 2 - NPRM Generation

A. Assumptions
1. FCC issues NPRM on announced schedule
2. Channel allotment not required - uses existing NTSC channels
3. FCC accepts Advisory Committee recommendation on system option
4. No litigation that impedes process

Task 3 - Comment & Decision Period

A. Assumptions
1. Allows time for comments & reply comments
2. Provides time for preparation of Final Report & Order
3. No litigation that impedes process

Milestone 4 - FCC Report & Order

A. Assumptions
1. Final Report & Order confirms provision for system option

Task 5 - STL Modification

A. Assumptions
1. Uses added transmitter & receiver hardware plus module replacement
2. Adequate equipment space available in existing facilities

Task 6 - STL Performance Analysis

A. Assumptions
1. STL passes proof-of-performance test on first try
2. Path reliability is good