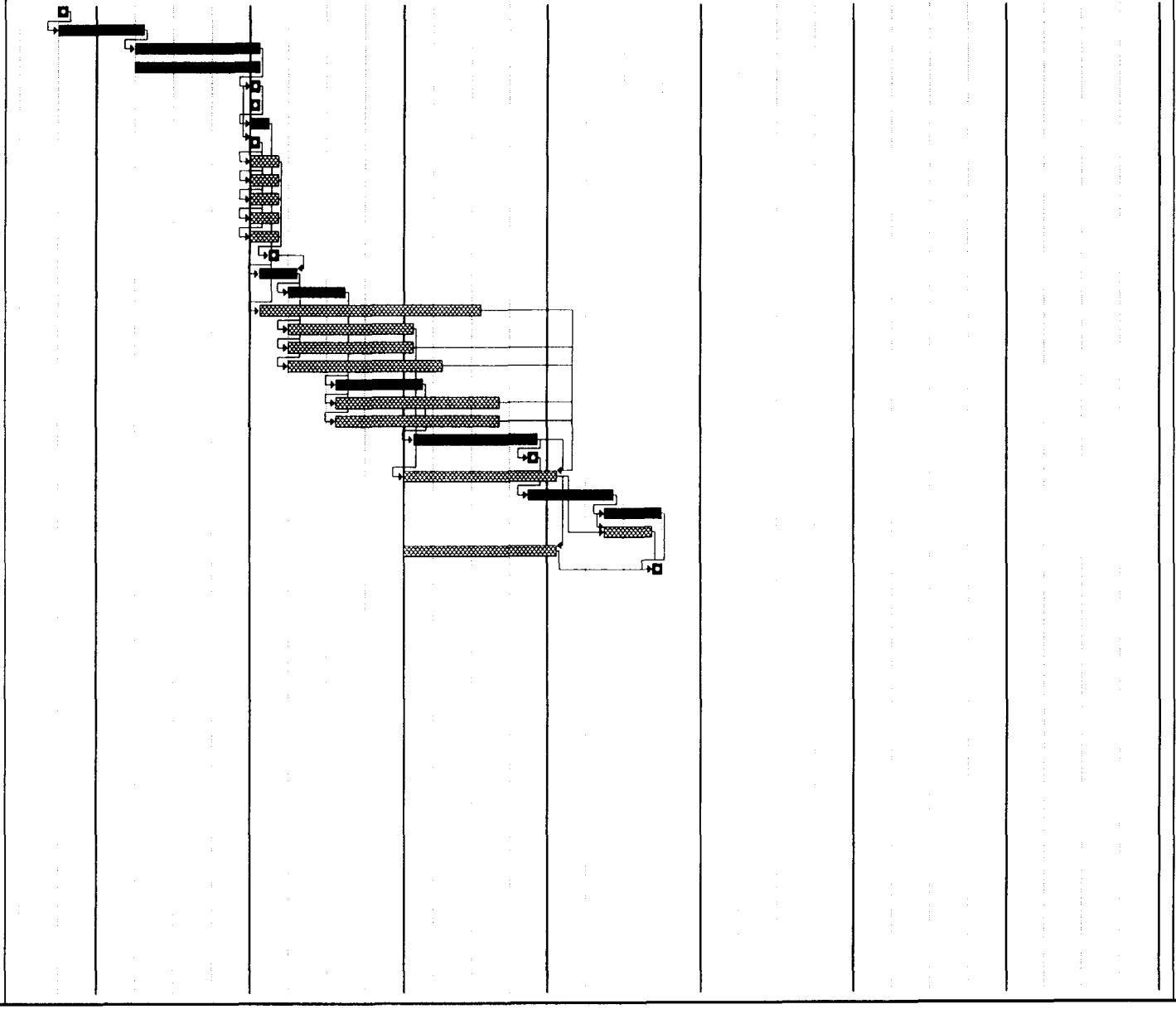
Task Ou e
01-01-92 12:18a

Projec ABLDI PRJ
Revisic 24

CABLE: HDTV DISTRIBUTION SYSTEM

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL REPORT	0dy
002	NPRM GENERATION	182dy
003	COMMENT & DECISION	275dy
003	PROCESS	
004	FCC REPORT & ORDER	0dy
004	STD DEFINED	
005	HDTV INFO AVAIL	31dy
006	TECHNICAL ISSUES	0dy
007	DISTORTION	59dy
008	RETURN LOSS	59dy
009	GROUP DELAY	59dy
010	BANDWIDTH	59dy
011	C/N	59dy
012	ISSUES RESOLVED	0dy
013	TV TO CATV SPEC	59dy
014	FIBER OPTIC OPTN	122dy
015	SYSTEM STUDIES	515dy
016	LINE EXTENDER	275dy
017	PASSIVES	275dy
018	TRUNK AMPLIFIER	365dy
019	OPTICAL PASSIVES	184dy
020	RECEIVER	365dy
021	LASER	365dy
022	O PASSIVE P-TYPE	273dy
023	OPTICS COMPLETE	0dy
024	PILOT PRODUCTION	365dy
025	BETA TEST-I	182dy
026	BETA TEST-II	123dy
027	PREPRODUCTION	92dy
028	QUALIFICATION	365dy
029	PRODUCTION	0dy

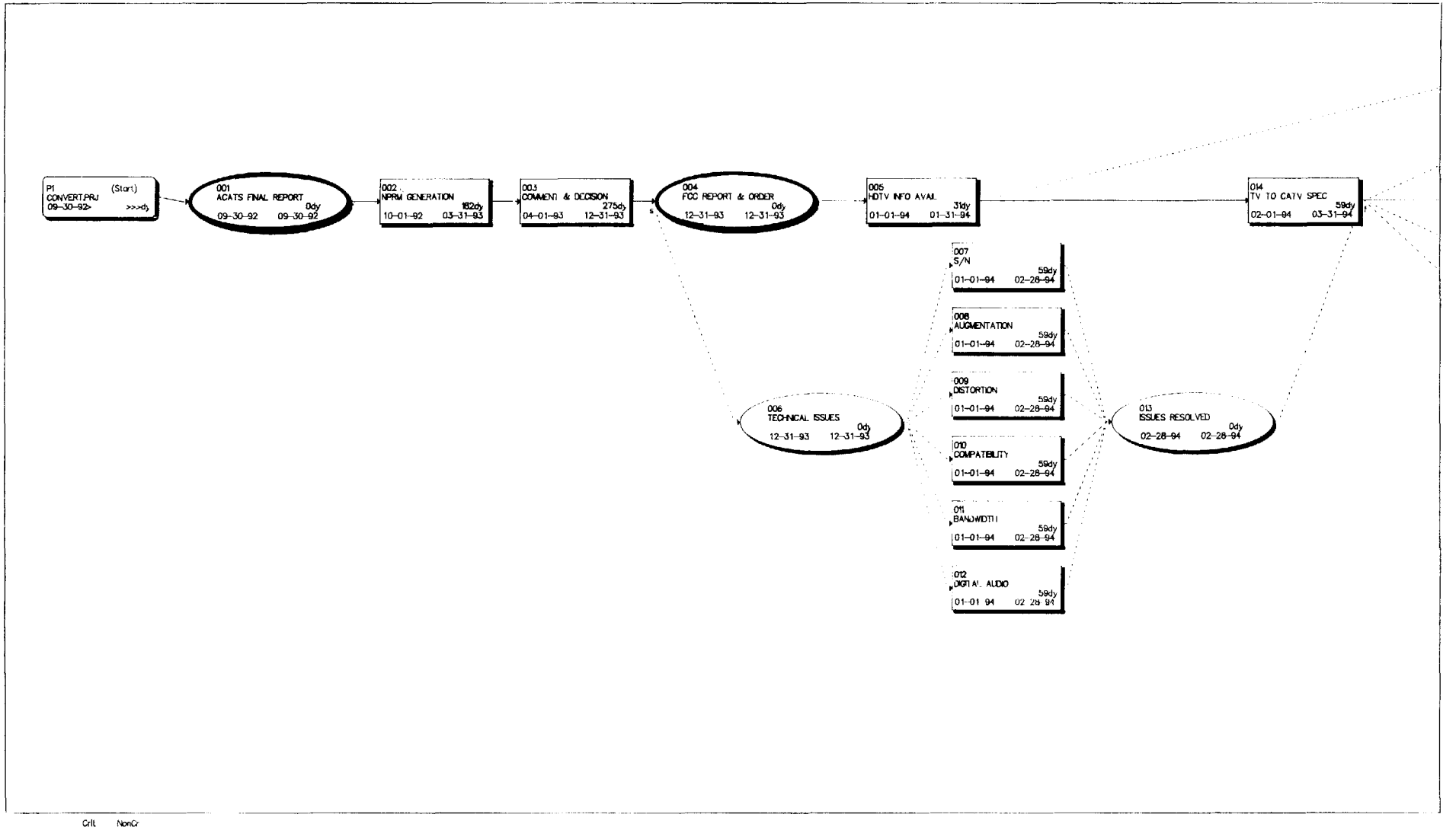


Unassigned Interrupted Noncritical Critical Milestone

PERT Chart
01-02-92 10:59a

Project: CONVERT.PRJ
Revision: 17

CABLE: HDTV CONVERTER DEVELOPMENT SCHEDULE



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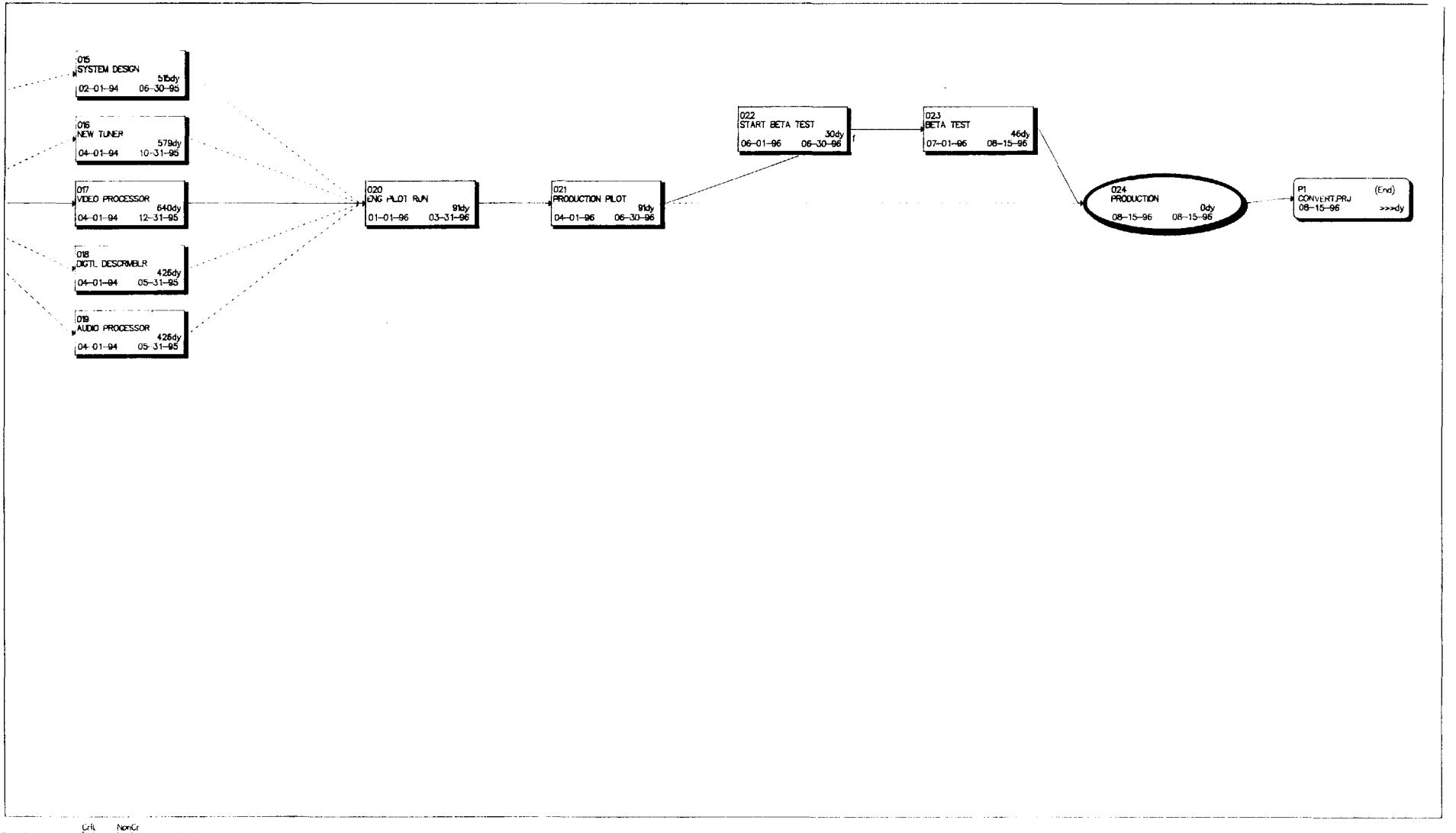
CABLE: HDTV CONVERTER DEVELOPMENT SCHEDULE



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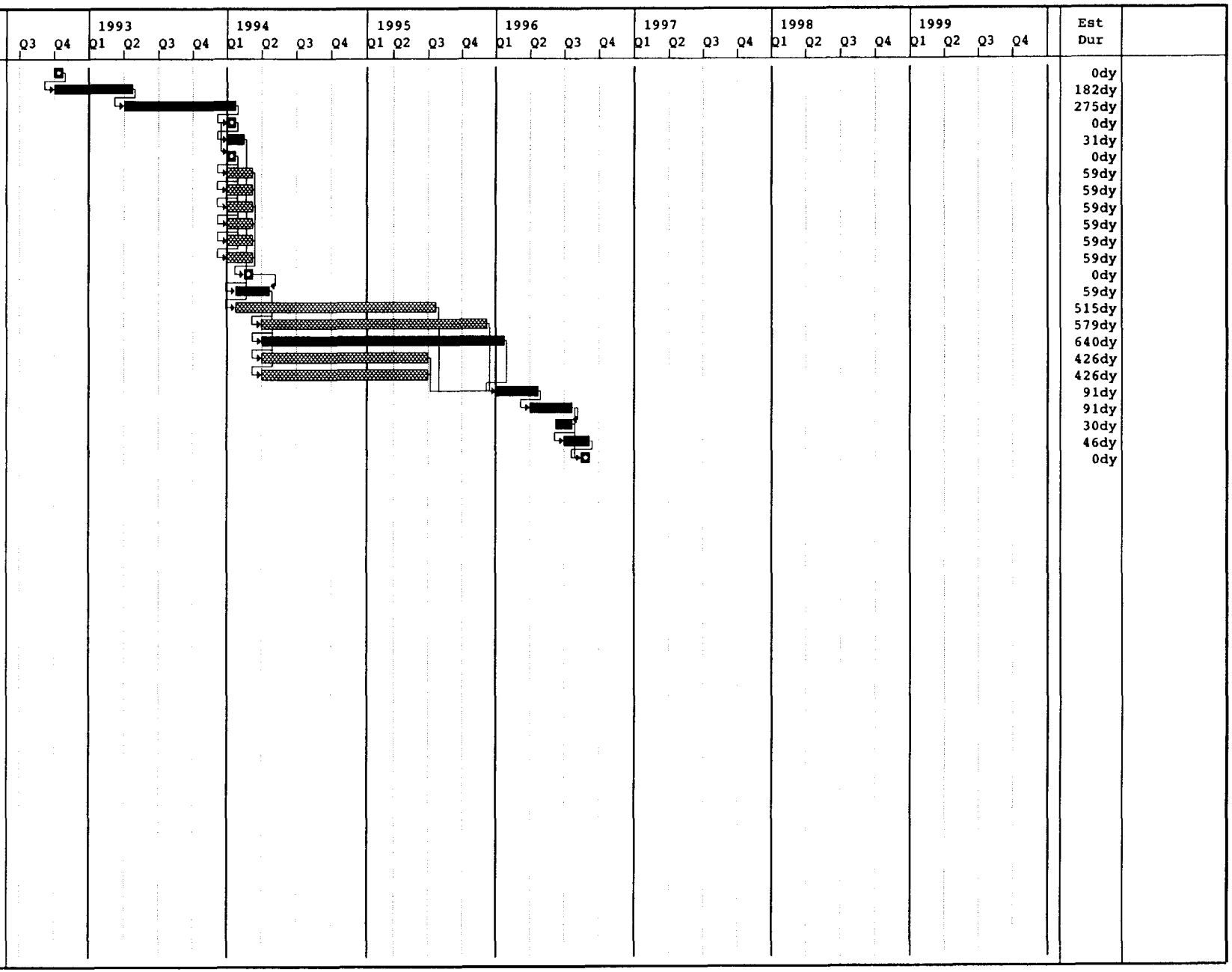
Proje CONVERT PRJ
Revisio 17

CABLE: HDTV CONVERTER DEVELOPMENT SCHEDULE

Task ID	Task Name (23 Days Per Column)	Est Dur
001	ACATS FINAL REPORT	0dy
002	NPRM GENERATION	182dy
003	COMMENT & DECISION	275dy
004	FCC REPORT & ORDER	0dy
005	HDTV INFO AVAIL	31dy
006	TECHNICAL ISSUES	0dy
007	S/N	59dy
008	AUGMENTATION	59dy
009	DISTORTION	59dy
010	COMPATIBILITY	59dy
011	BANDWIDTH	59dy
012	DIGITAL AUDIO	59dy
013	ISSUES RESOLVED	0dy
014	TV TO CATV SPEC	59dy
015	SYSTEM DESIGN	515dy
016	NEW TUNER	579dy
017	VIDEO PROCESSOR	640dy
018	DIGTL DESCRMBLR	426dy
019	AUDIO PROCESSOR	426dy
020	ENG PILOT RUN	91dy
021	PRODUCTION PILOT	91dy
022	START BETA TEST	30dy
023	BETA TEST	46dy
024	PRODUCTION	0dy

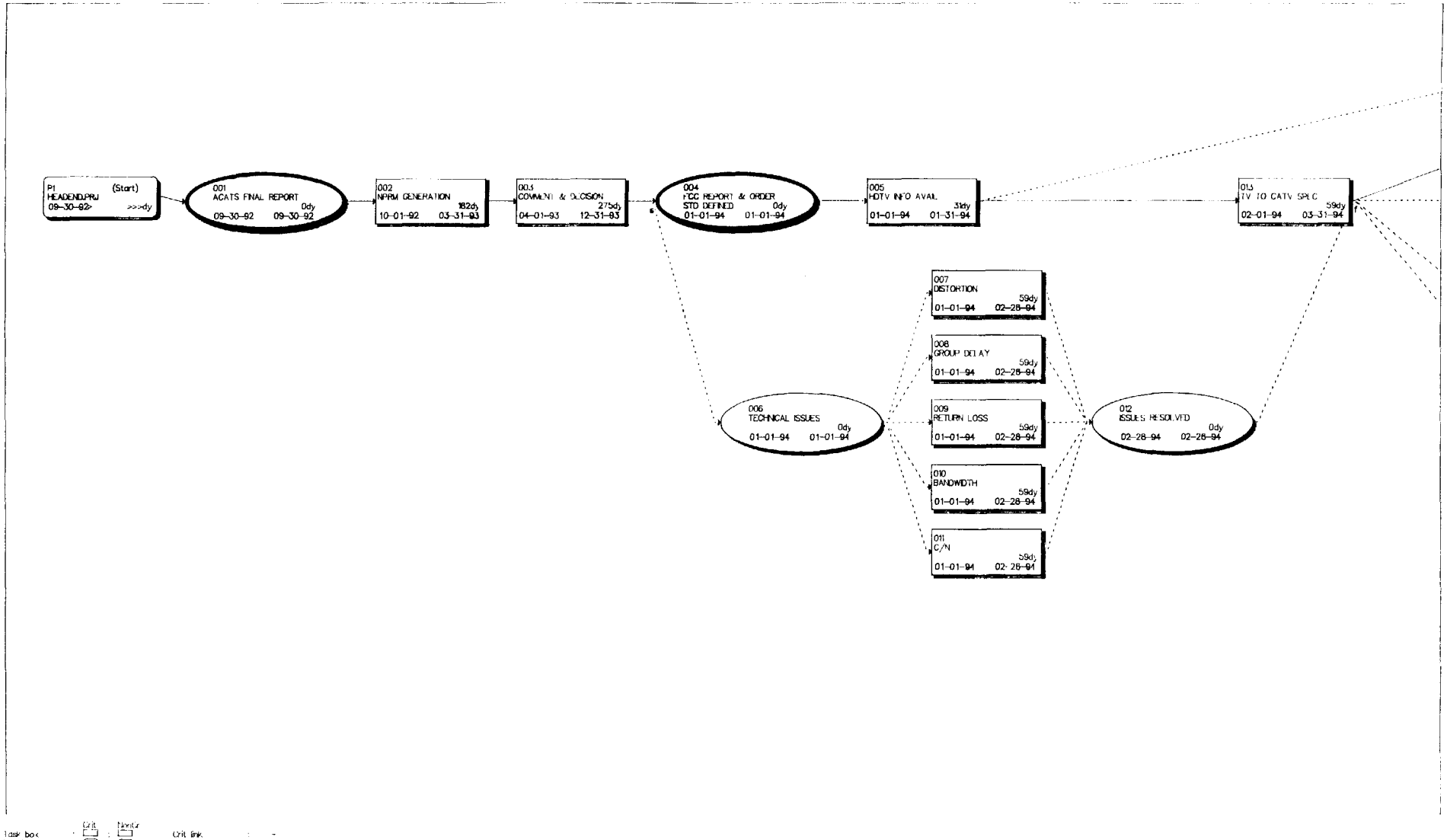


Unassigned Interrupted Noncritical Critical Milestone

PERT Chart
01-02-92 11:24a

Project: HEADEND.PRJ
Revision: 28

CABLE: HDTV HEADEND EQUIPMENT DEVELOPMENT SCHEDULE



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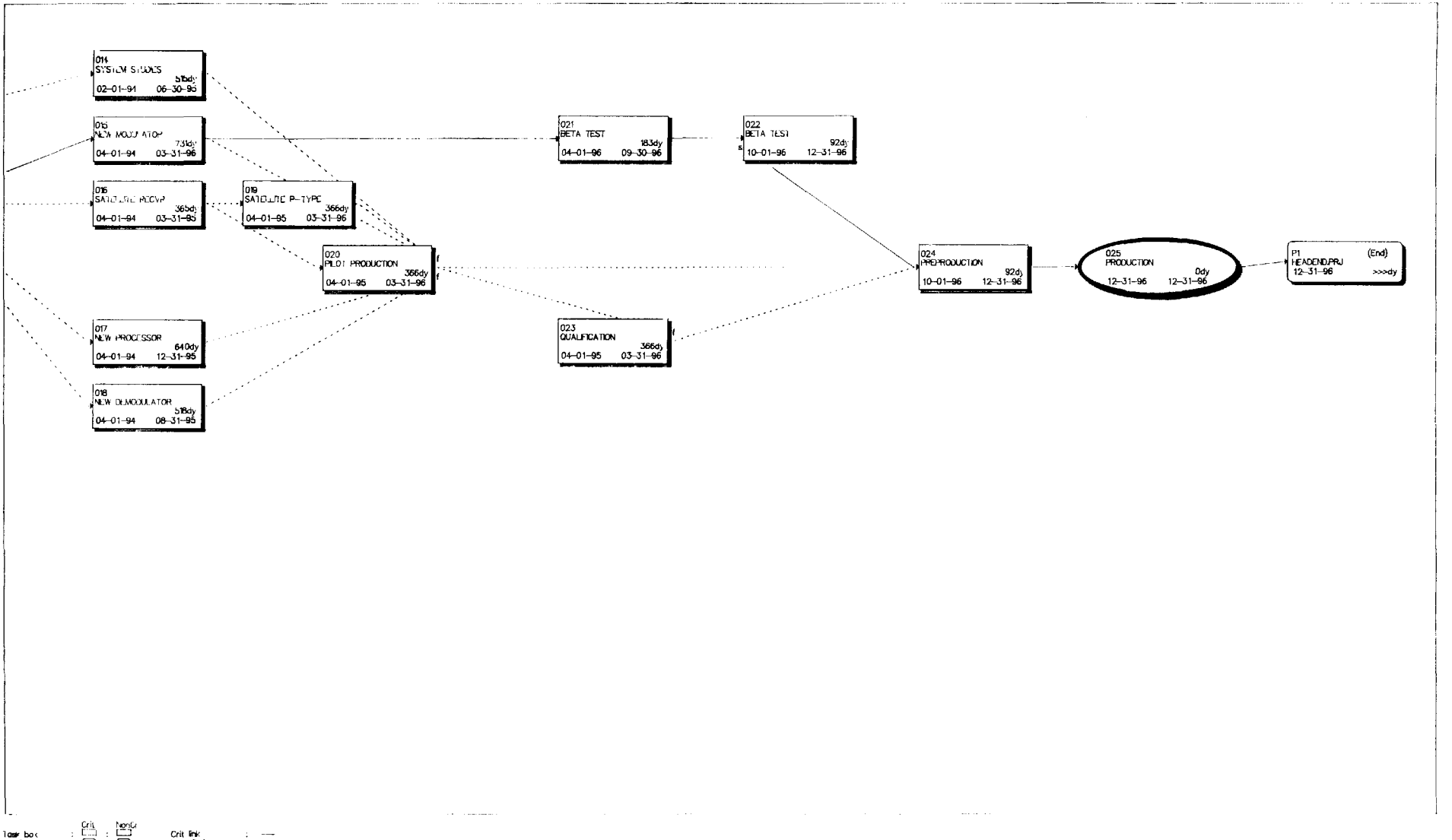
CABLE: HDTV HEADEND EQUIPMENT DEVELOPMENT SCHEDULE



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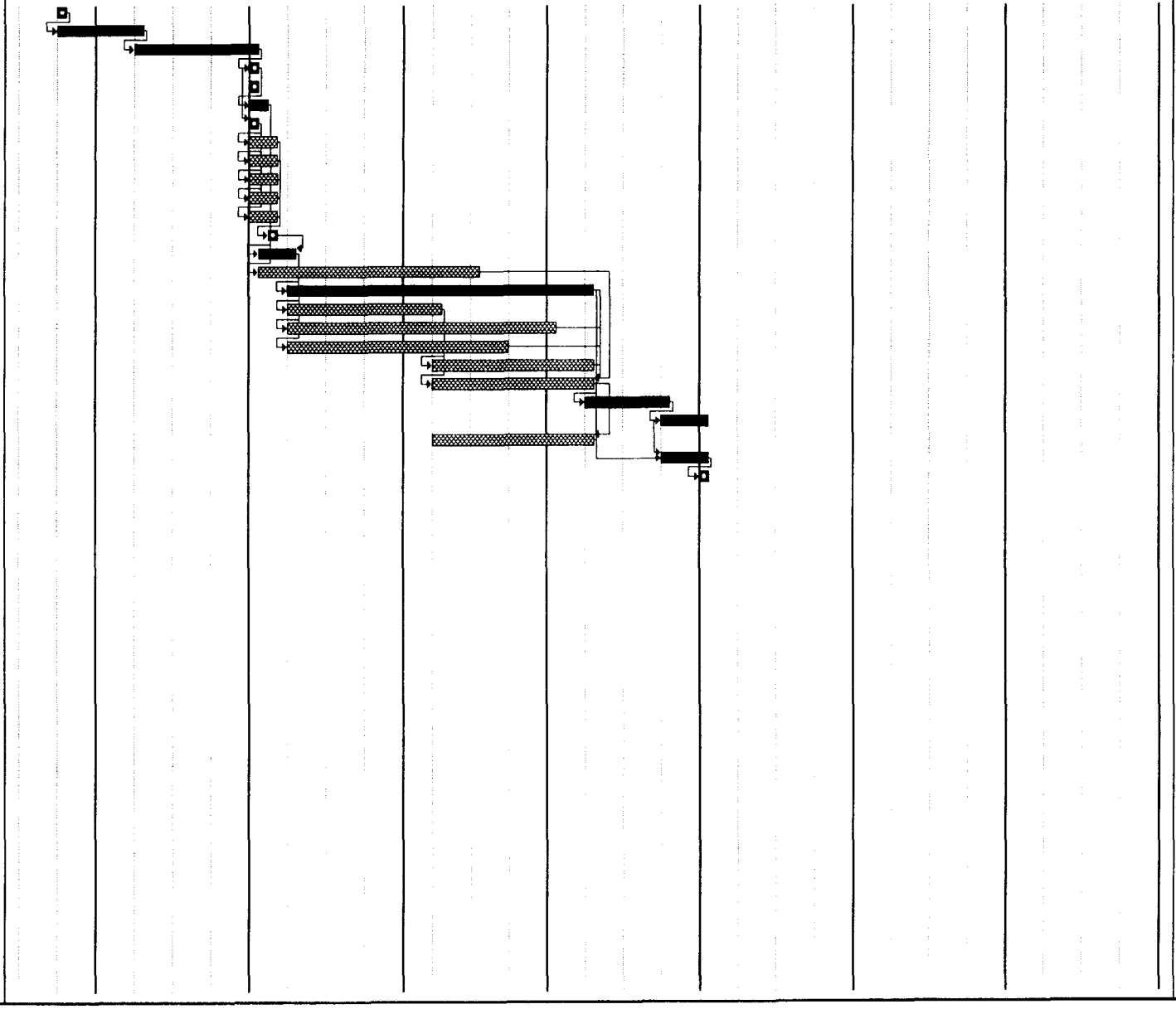
01-01-92 12:26a

Proje HEADEND PRJ
Revisio 28

CABLE: HDTV HEADEND EQUIPMENT SCHEDULE

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL REPORT	0dy
002	NPRM GENERATION	182dy
003	COMMENT & DECISION	275dy
004	FCC REPORT & ORDER	0dy
004	STD DEFINED	
005	HDTV INFO AVAIL	31dy
006	TECHNICAL ISSUES	0dy
007	DISTORTION	59dy
008	GROUP DELAY	59dy
009	RETURN LOSS	59dy
010	BANDWIDTH	59dy
011	C/N	59dy
012	ISSUES RESOLVED	0dy
013	TV TO CATV SPEC	59dy
014	SYSTEM STUDIES	515dy
015	NEW MODULATOR	731dy
016	SATELLITE RECVR	365dy
017	NEW PROCESSOR	640dy
018	NEW DEMODULATOR	518dy
019	SATELLITE P-TYPE	366dy
020	PILOT PRODUCTION	366dy
021	BETA TEST	183dy
022	BETA TEST	92dy
023	QUALIFICATION	366dy
024	PREPRODUCTION	92dy
025	PRODUCTION	0dy

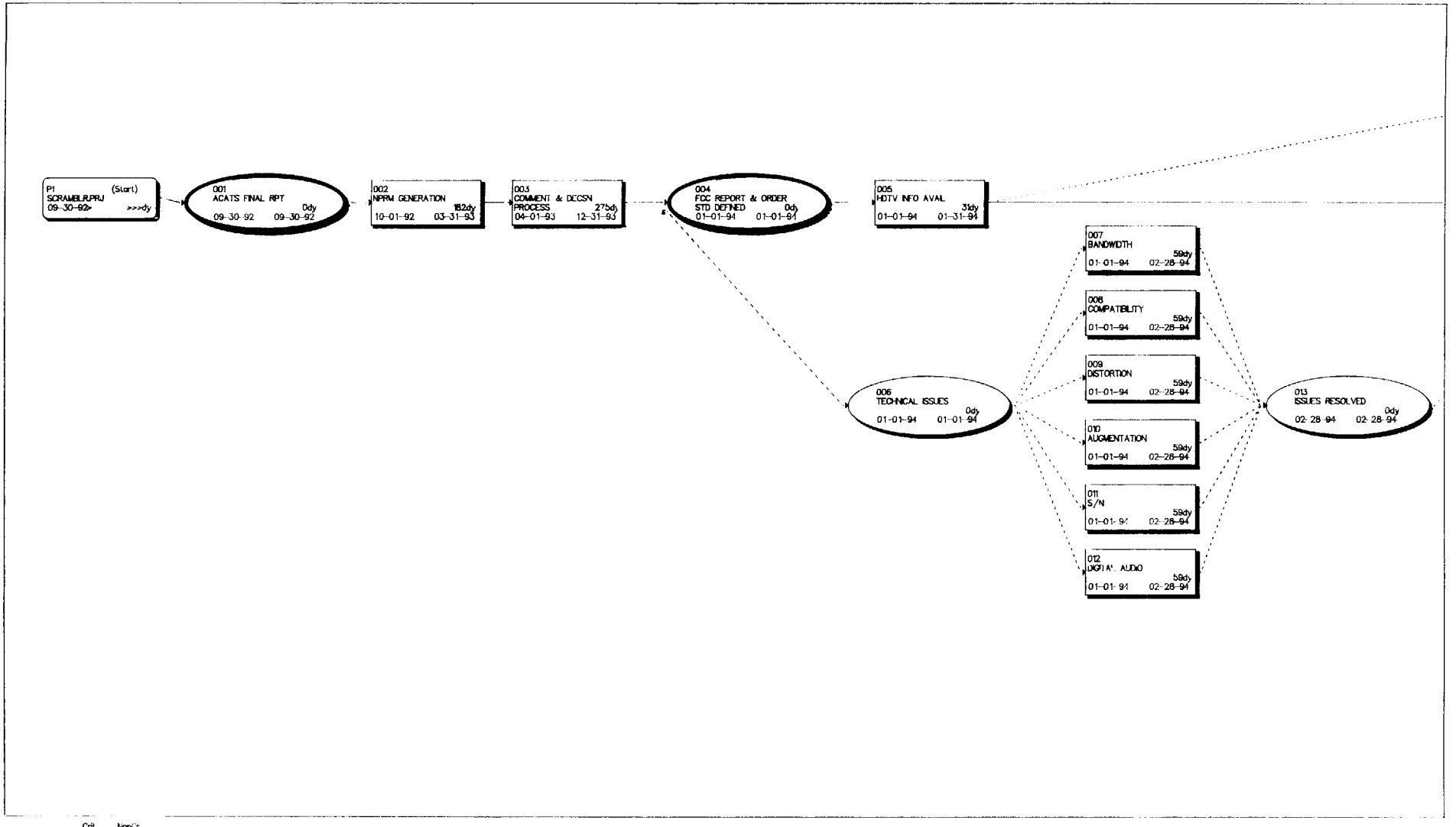


Unassigned Interrupted Noncritical Critical Milestone

PERT Chart
01-02-92 4:19p

CABLE: HDTV SCRAMBLER DEVELOPMENT SCHEDULE

Project: SCRAMBLR.PRJ
Revision: 19



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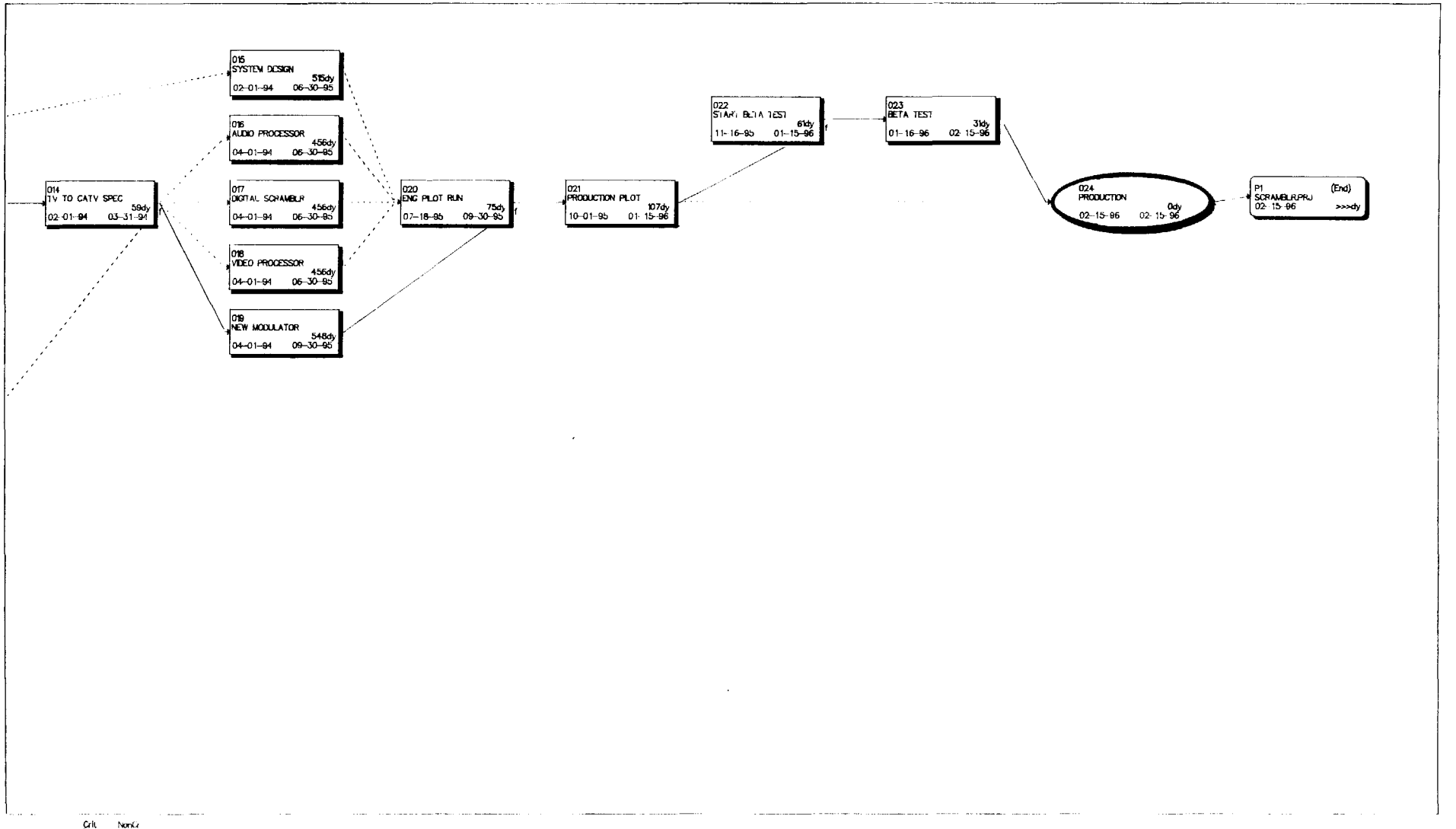
CABLE: HDTV SCRAMBLER DEVELOPMENT SCHEDULE



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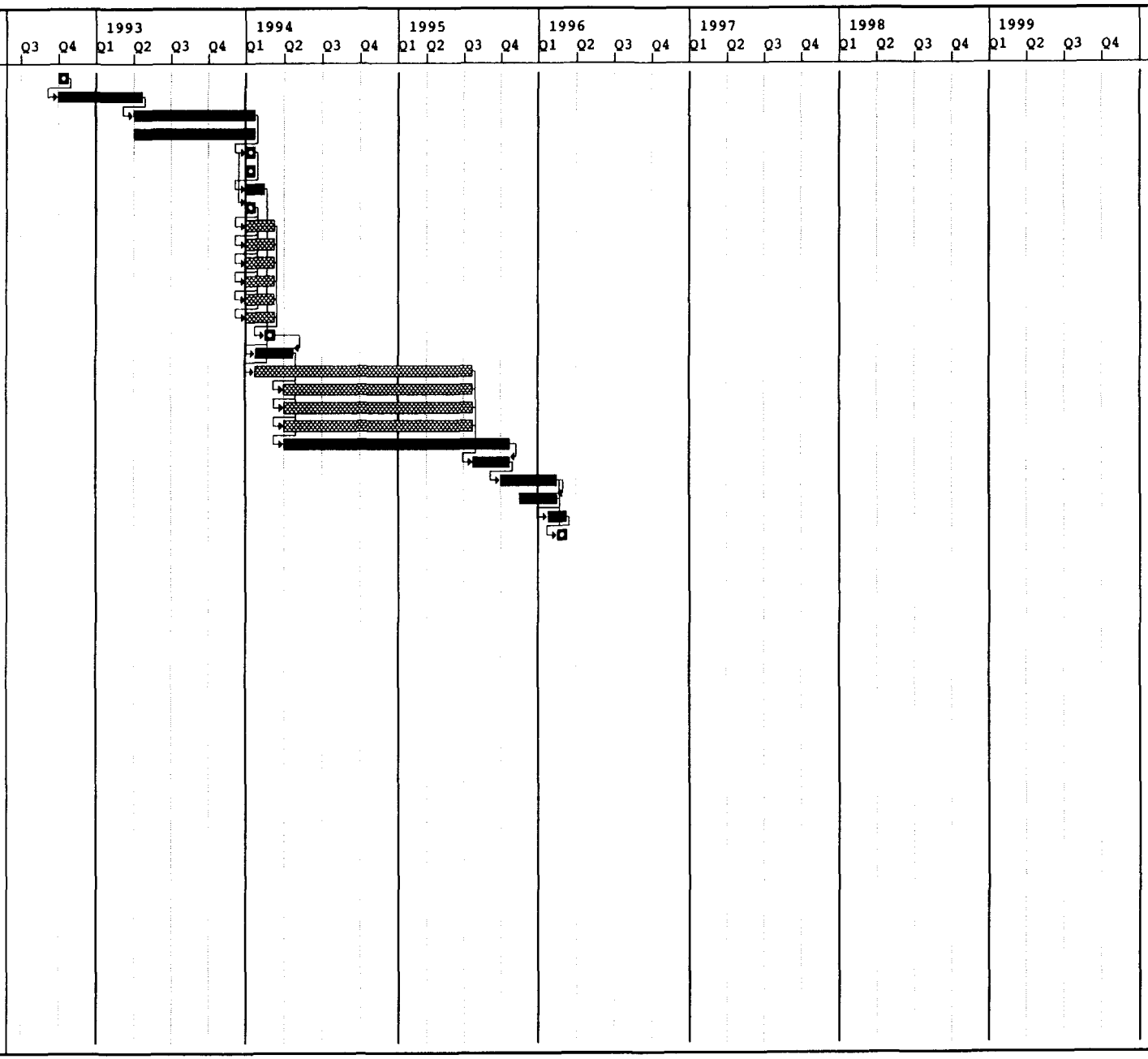
Projec CRAMBLP PRJ
Revisic 9

CABLE: HDTV SCRAMBLER DEVELOPMENT SCHEDULE

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATION	182dy
003	COMMENT & DECSN	275dy
003	PROCESS	
004	FCC REPORT & ORDER	0dy
004	STD DEFINED	
005	HDTV INFO AVAIL	31dy
006	TECHNICAL ISSUES	0dy
007	BANDWIDTH	59dy
008	COMPATIBILITY	59dy
009	DISTORTION	59dy
010	AUGMENTATION	59dy
011	S/N	59dy
012	DIGITAL AUDIO	59dy
013	ISSUES RESOLVED	0dy
014	TV TO CATV SPEC	59dy
015	SYSTEM DESIGN	515dy
016	AUDIO PROCESSOR	456dy
017	DIGITAL SCRAMBLR	456dy
018	VIDEO PROCESSOR	456dy
019	NEW MODULATOR	548dy
020	ENG PILOT RUN	75dy
021	PRODUCTION PILOT	107dy
022	START BETA TEST	61dy
023	BETA TEST	31dy
024	PRODUCTION	0dy



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Common Carrier: Video Distribution w/SONET at OC-12/24

General Assumptions

1. FCC Report & Order on Advanced Television Service is issued in the 1993 timeframe.

2. Requirements for 360 Mb/s and 1.2 Gb/s ATV transport will be satisfied by SONET OC-12 and OC-24 level services.

3. Sufficient demand for SONET OC-12 and OC-24 level services will materialize.

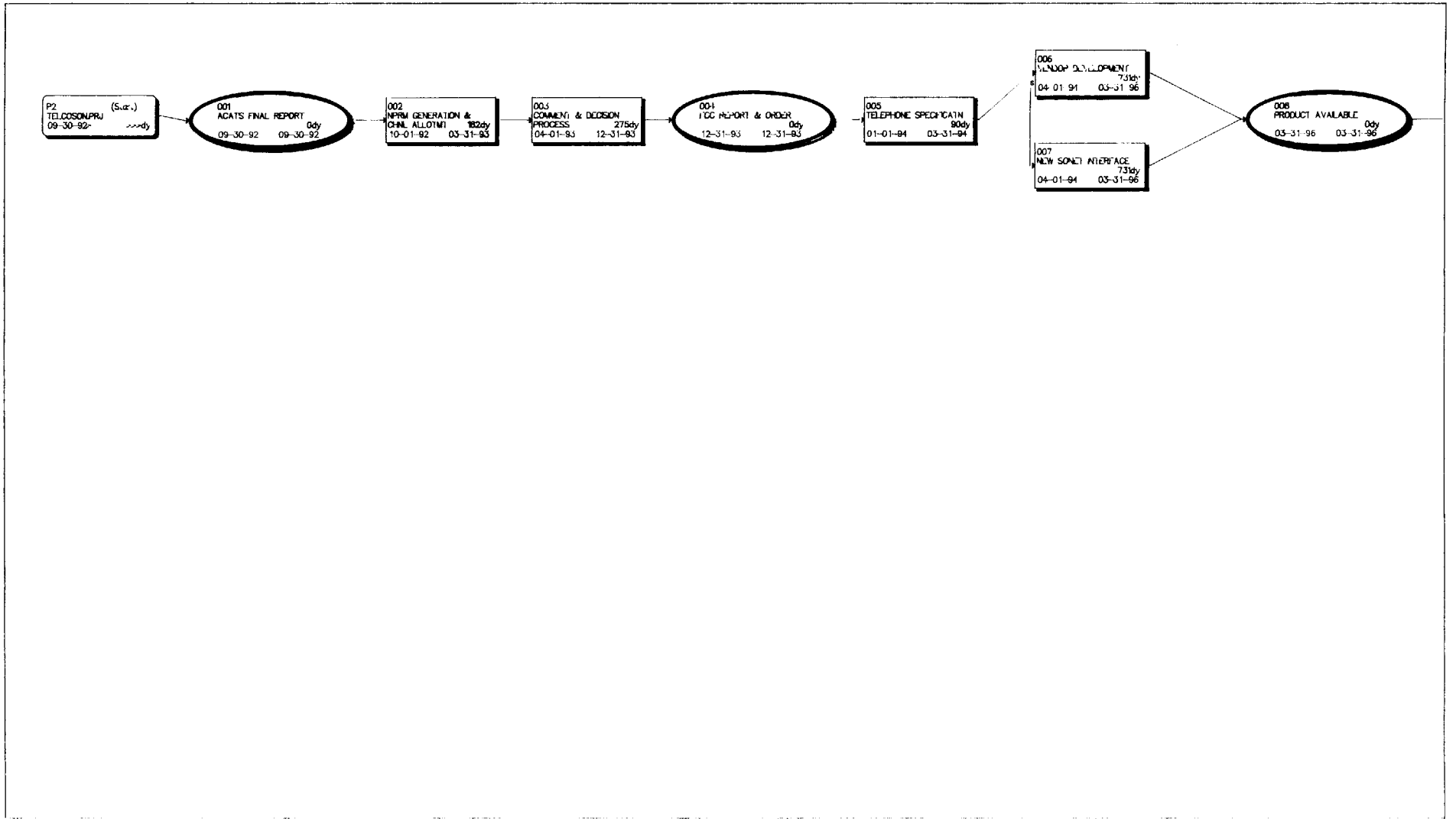
4. ATV Customer Premises Equipment and production equipment will be designed to operate/interface at the SONET rates as required.

5. Time frames associated with the vendor development of SONET equipment will coincide with normal product development time intervals.

PERT Chart
01-02-92 5:15p

Project: TELCOSONPRJ
Revision: 0

COMMON CARRIER: VIDEO DISTRIBUTION W/SONET AT OC-12/24



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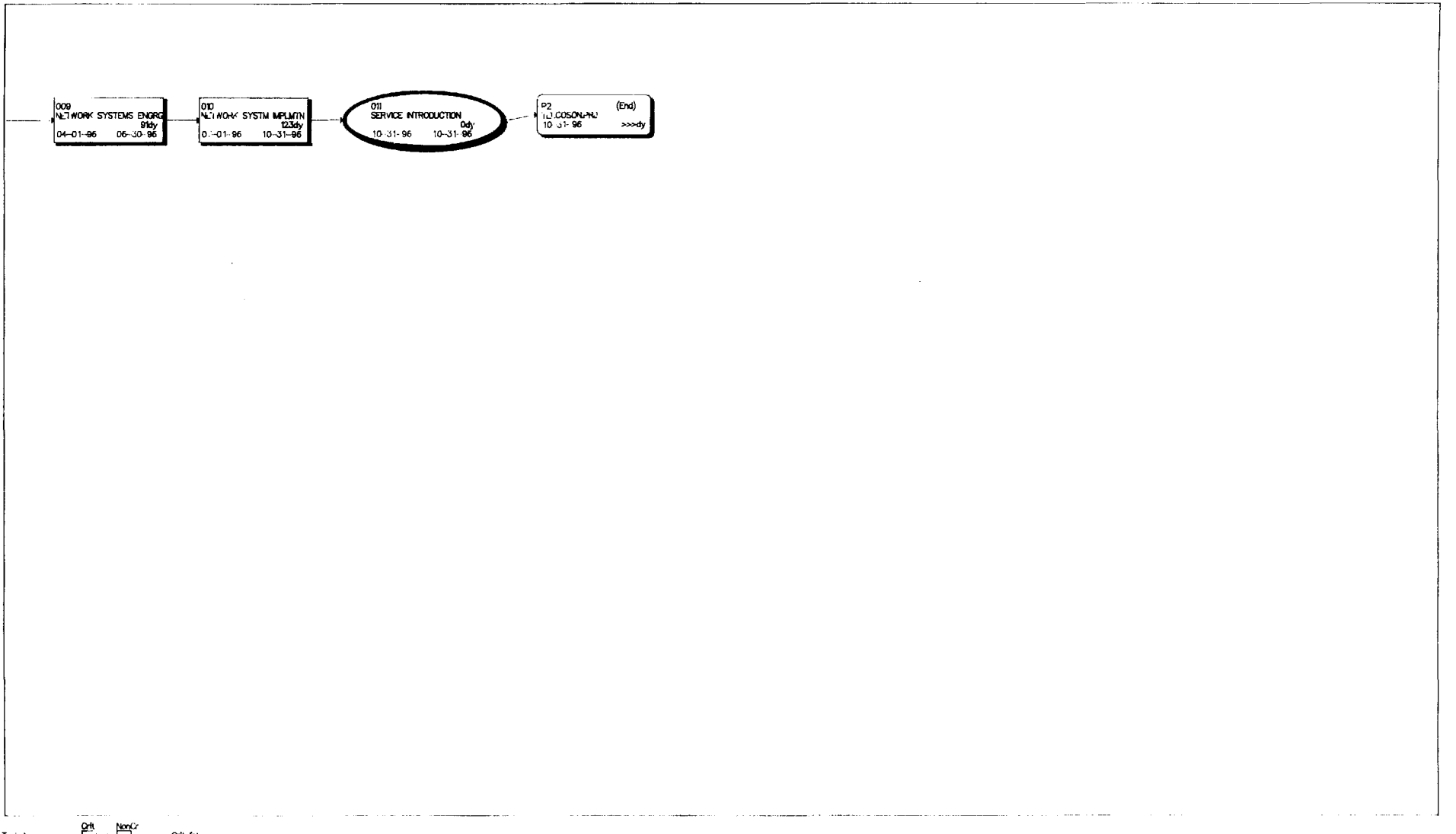
COMMON CARRIER: VIDEO DISTRIBUTION W/SONET AT OC-12/24



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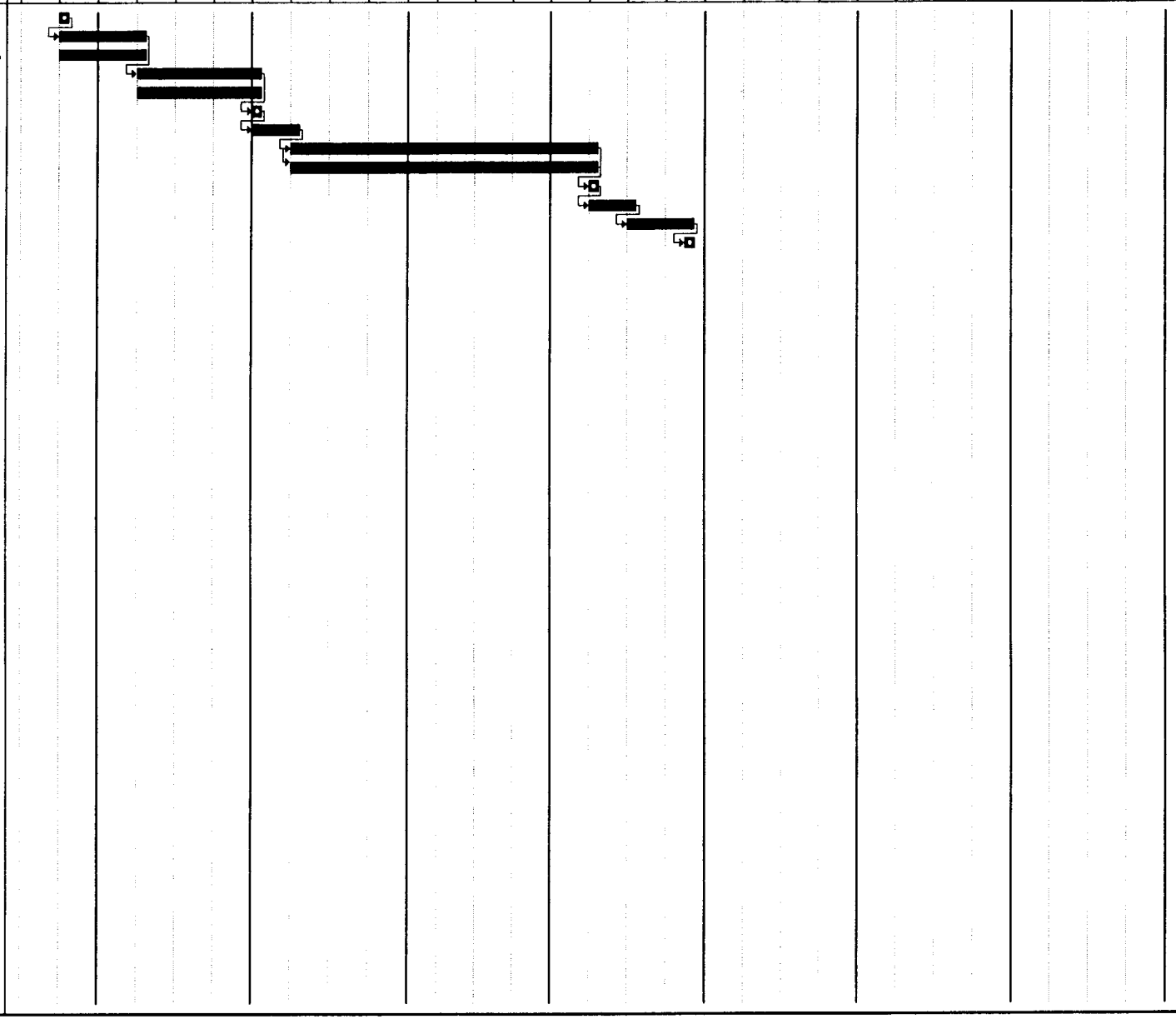
Revisio 0

COMMON CARRIER: VIDEO DISTRIBUTION W/SONET AT OC-12/24

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL REPORT	0dy
002	NPRM GENERATION &	182dy
002	CHNL ALLOTMT	
003	COMMENT & DECISION	275dy
003	PROCESS	
004	FCC REPORT & ORDER	0dy
005	TELEPHONE SPECIFICATN	90dy
006	VENDOR DEVELOPMENT	731dy
007	NEW SONET INTERFACE	731dy
008	PRODUCT AVAILABLE	0dy
009	NETWORK SYSTEMS ENGRG	91dy
010	NETWORK SYSTM IMPLMTN	123dy
011	SERVICE INTRODUCTION	0dy



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Satellite Distribution: Terminal Equipment Development

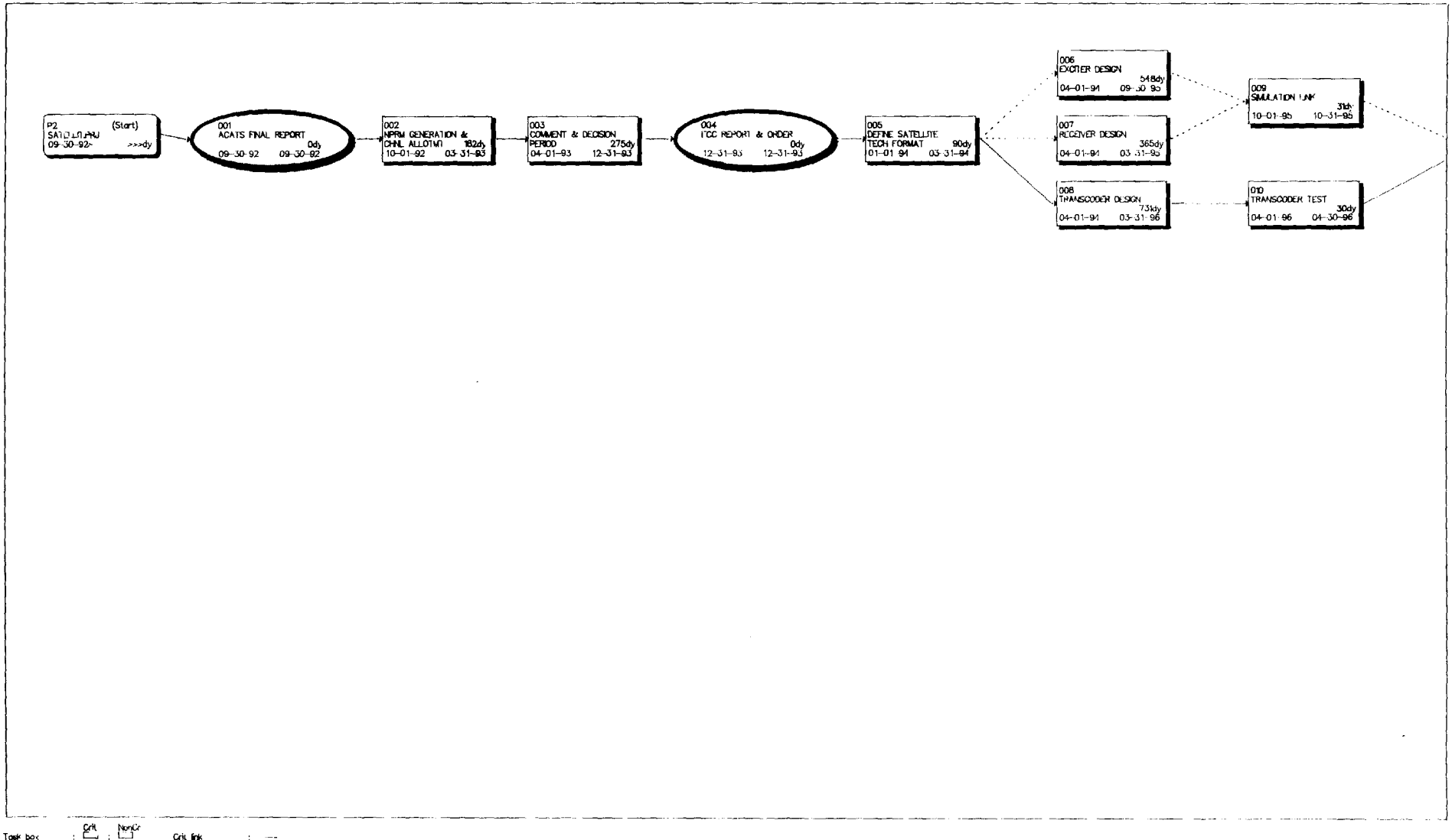
General Assumptions

1. Existing transponders adequate to carry ATV signals.
2. Only terminal equipment (encoders, exciters, receivers) requires replacement.
3. No resource limitations on IC development.

PERT Chart
01-02-92 3:31p

Project: SATELLIT.PRJ
Revision: 1

SATELLITE DISTRIBUTION TERMINAL EQUIPMENT DEVELOPMENT



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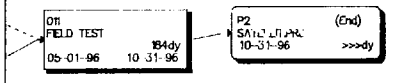
SATELLITE DISTRIBUTION: TERMINAL EQUIPMENT DEVELOPMENT



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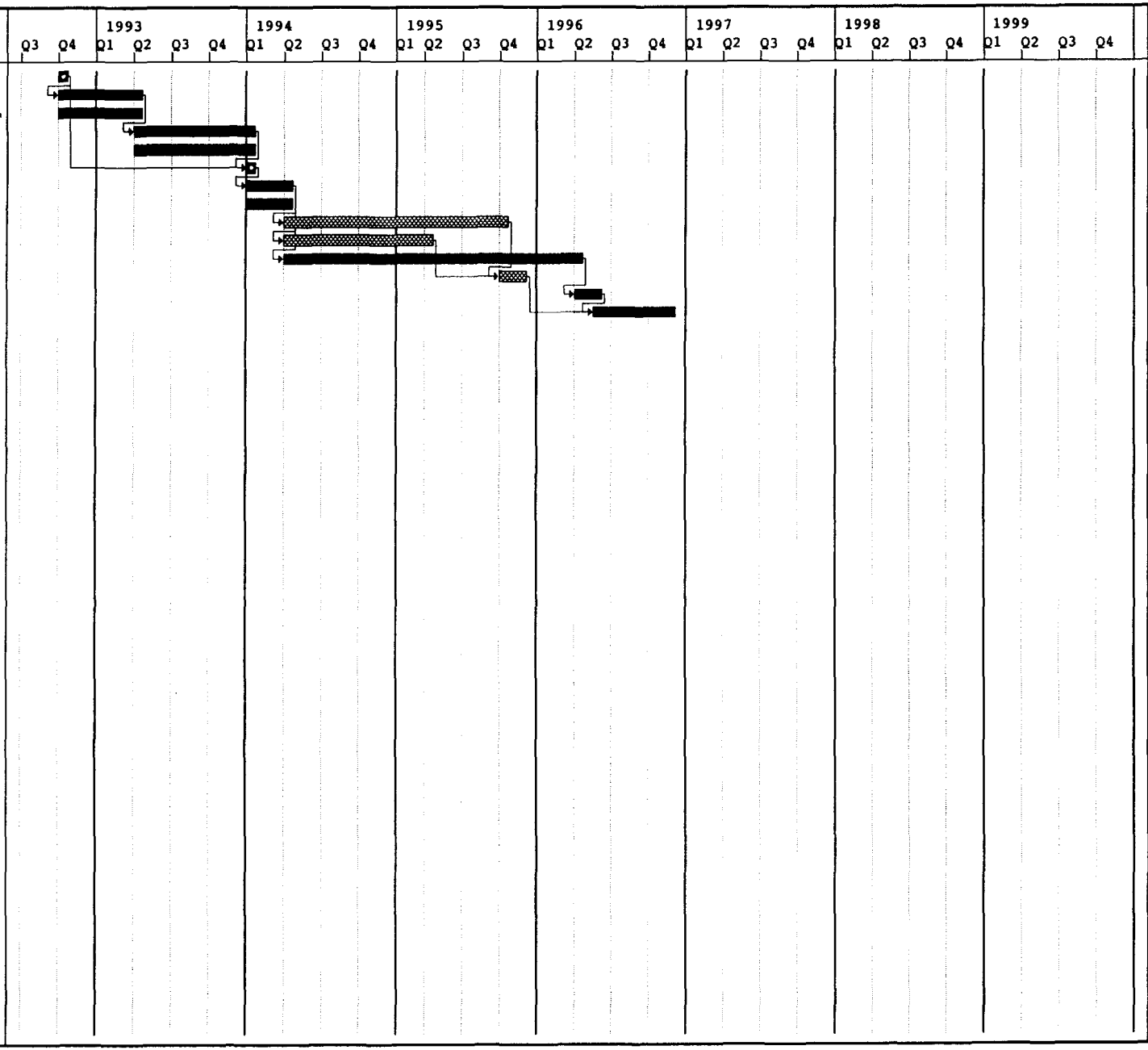
Revisio 1

SATELLITE DISTRIBUTION: TERMINAL EQUIPMENT DEVELOPMENT

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL REPORT	0dy
002	NPRM GENERATION &	182dy
002	CHNL ALLOTMT	
003	COMMENT & DECISION	275dy
003	PERIOD	
004	FCC REPORT & ORDER	0dy
005	DEFINE SATELLITE	90dy
005	TECH FORMAT	
006	EXCITER DESIGN	548dy
007	RECEIVER DESIGN	365dy
008	TRANSCODER DESIGN	731dy
009	SIMULATION LINK	31dy
010	TRANSCODER TEST	30dy
011	FIELD TEST	184dy



Unassigned Interrupted Noncritical Critical Milestone

IS/WP-2 PERT Chart

Supporting List of Assumptions

Consumer Products: TV Receiver Development/Production

General Assumptions

1. PERT chart is based on general market availability of HDTV product.
2. A Proponent may have a potential 9-month advantage if its system is selected.
3. No resource limitations on IC development.
4. High resolution displays will be available and are not included in this process.
5. ICs are ASICs and include both standard cell custom and gate array types.

Specific Assumptions

Task 2 - NPRM Generation

1. Sufficient public domain information will be available at the time of the NPRM to permit meaningful work.

Task 9 - Initial Emulator Development

1. IC emulators are required for the more complex ASICs.

Task 12 - IC Design Simulation

1. IC design simulations can begin three months prior to emulator completion.

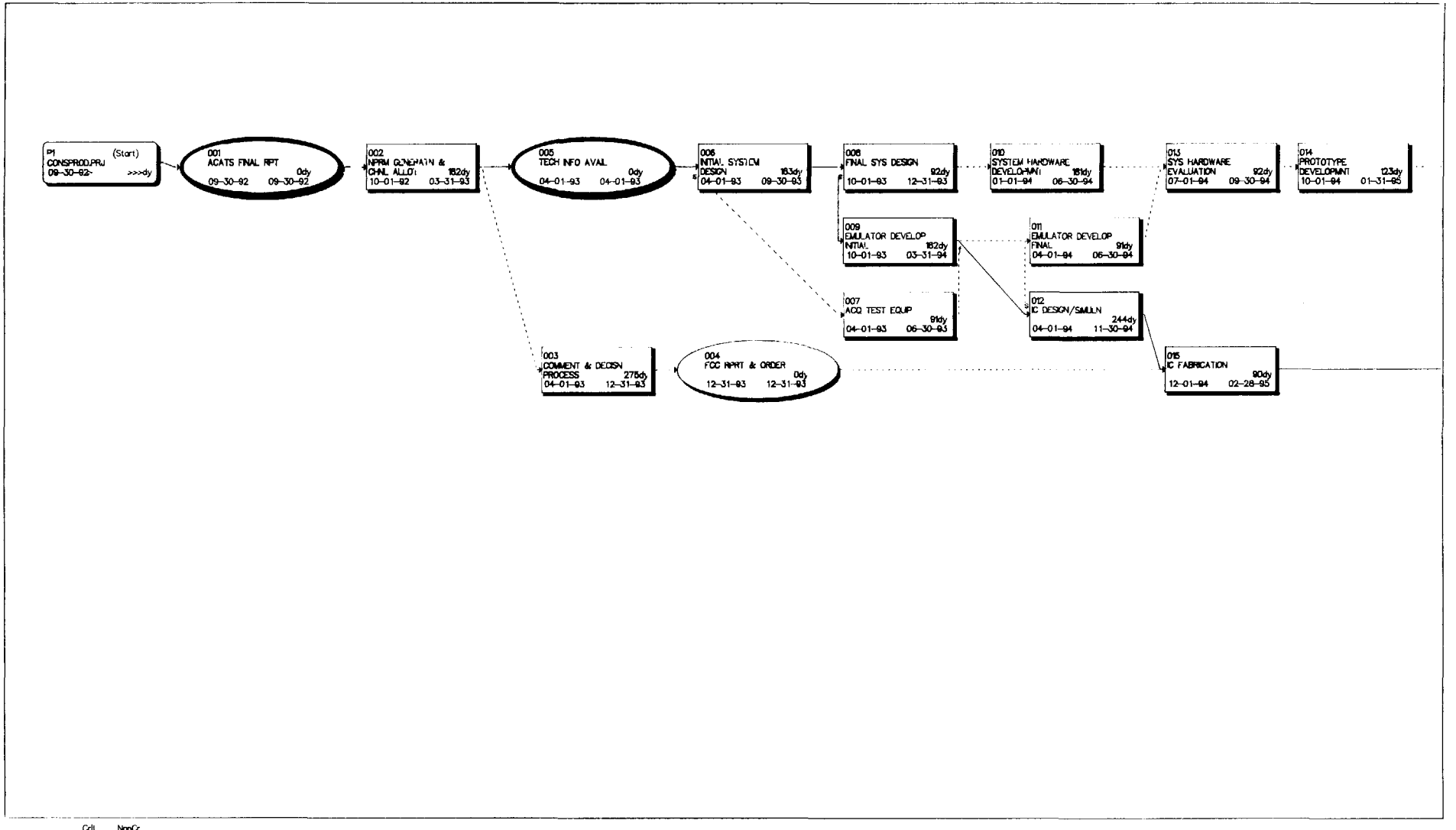
Task 15 - IC Fabrication

1. IC fabrication will not begin until FCC final Report and Order has been released.

Tasks 18 & 19 - Design Stages I & II

1. IC development assumes one major (Task 18) and one minor (Task 19) iteration of the layout.

CONSUMER PRODUCTS: TV RECEIVER DEVELOPMENT SCHEDULE



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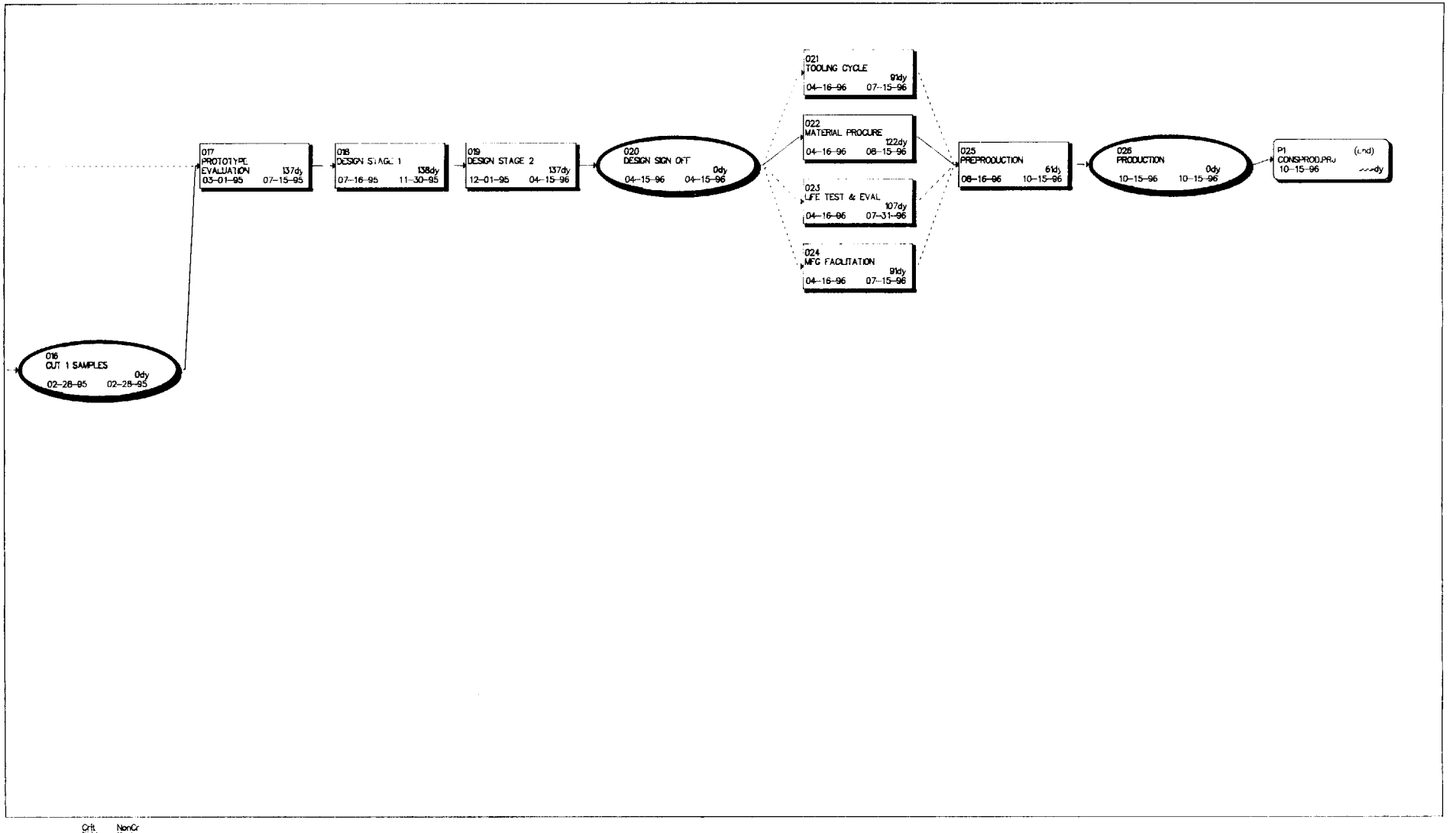
CONSUMER PRODUCTS: TV RECEIVER DEVELOPMENT SCHEDULE



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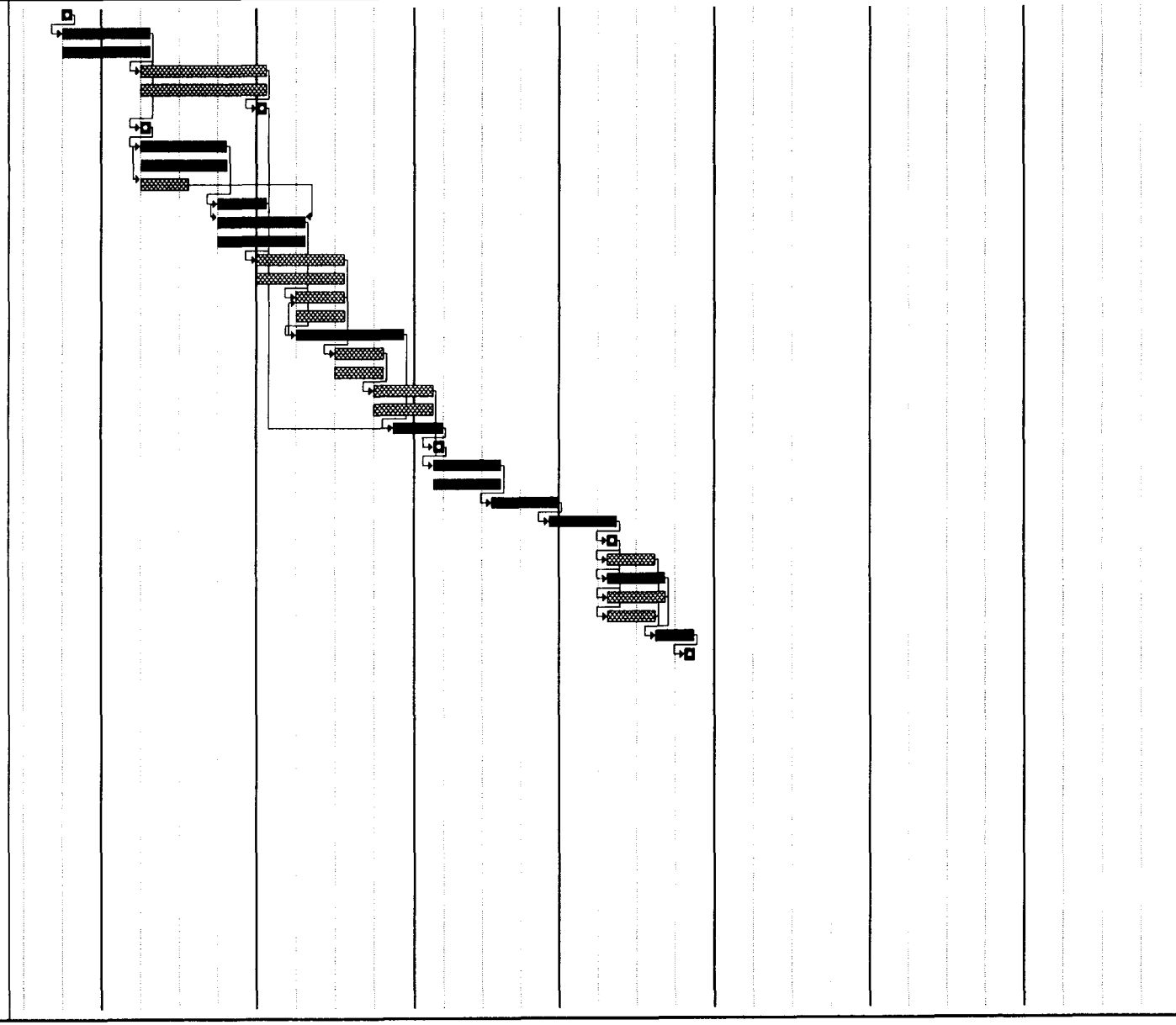
Project NSPROD PRJ
Revision 6

CONSUMER PRODUCTS: TV RECEIVER DEVELOPMENT SCHEDULE

Task ID	Task Name 23 Days Per Column	Est Dur
001	ACATS FINAL RPT	0dy
002	NPRM GENERATN &	182dy
002	CHNL ALLOT	
003	COMMENT & DECISN	275dy
003	PROCESS	
004	FCC RPRT & ORDER	0dy
005	TECH INFO AVAIL	0dy
006	INITIAL SYSTEM	183dy
006	DESIGN	
007	ACQ TEST EQUIP	91dy
008	FINAL SYS DESIGN	92dy
009	EMULATOR DEVELOP	182dy
009	INITIAL	
010	SYSTEM HARDWARE	181dy
010	DEVELOPMNT	
011	EMULATOR DEVELOP	91dy
011	FINAL	
012	IC DESIGN/SIMULN	244dy
013	SYS HARDWARE	92dy
013	EVALUATION	
014	PROTOTYPE	123dy
014	DEVELOPMNT	
015	IC FABRICATION	90dy
016	CUT 1 SAMPLES	0dy
017	PROTOTYPE	137dy
017	EVALUATION	
018	DESIGN STAGE 1	138dy
019	DESIGN STAGE 2	137dy
020	DESIGN SIGN OFF	0dy
021	TOOLING CYCLE	91dy
022	MATERIAL PROCURE	122dy
023	LIFE TEST & EVAL	107dy
024	MFG FACILITATION	91dy
025	PREPRODUCTION	61dy
026	PRODUCTION	0dy



Unassigned Interrupted Noncritical Critical Milestone

Implementation Subcommittee Working Party 2
on Transition Scenarios

Preliminary List of Questions for Proponents

The following questions are for your consideration and response at the meeting of IS/WP-2 to be scheduled in March, 1992. They are divided into a general category and categories corresponding to the industry segments represented in the PERT and Gantt charts being supplied to you simultaneously with this list. The questions will be explained at the meeting of January 13, 1992.

General

1. Is extensibility built into your system? When can it be implemented? Under what prescribed conditions?

2. How long following an Advisory Committee recommendation of your system will the detailed technical information necessary for the setting of standards and for the design and manufacture of both professional and consumer products be available?

3. What provisions have you made for communicating information sufficient for design and manufacture to manufacturers of consumer and professional equipment? Do you have a program planned for providing direct support to help get such organizations up and running with your system?

4. What arrangements have you made with integrated circuit vendors for supplying chips for your system? What availability of ICs do you anticipate for other manufacturers?

5. What is your expectation for the time of introduction of your system? Do you have any suggestions for possible head starts in any areas to shorten the time to introduction?

Broadcast

1. What are the transmission power levels (ERP) required for the system for coverage equal to NTSC? Please specify for both low and high VHF and for UHF. Are there any power variations across the UHF band? Are any special transmitter or antenna characteristics required?

2. What signal form is anticipated for use in distribution to Network affiliates and/or to cable headends? Have you anticipated both satellite and terrestrial common carrier delivery? Have these been tested experimentally?

3. What forms of further production are possible using the signal delivered to affiliates and headends?

   a) cut into the signal
   b) key into the signal
   c) full image manipulation

4. If the signal delivered to affiliates/headends must be fully decoded for further production, in the forms listed in 3 above, how many times can this be done with acceptable quality in the resulting picture? Have you tested this experimentally?

5. Is it possible to carry the ATV signals and NTSC signals together on a single microwave channel, as for Studio-to-Transmitter Links (STLs) and similar circuits? If so, what is the required bandwidth?

6. What signal form is anticipated for contribution circuits for production? Are different quality levels provided? Have you considered both satellite and terrestrial common carrier delivery? Assuming the production processes listed in 3 above, how many times through the signal form can an image go while retaining acceptable production quality in the resulting picture? Have you tested this experimentally?

Cable

1. What provisions are made for conditional access without decoding the signal? Is partial decoding required? How complex is the equipment required to accomplish these functions?

2. See questions 2, 3, 4, & 5 under Broadcast above.

Common Carrier

1. What form of signal do you propose for transmission over terrestrial common carrier links?

2. Are the SONET bit rates assumed the correct choices?

3. What bit error rates does your proposed distribution format require of the transport system? Your production contribution format?

Consumer

1. What is required in a consumer VCR for the system? When will such a VCR be available? Is new technology required first? What format is to be recorded? Are any current VCR features not possible with this format? Have you verified this experimentally?

Satellite

1. Is it possible to carry the ATV signal and an NTSC signal on the same transponder? If so, at what bandwidth? What other multiples are possible with your system?