

**COST, SCHEDULE, AND  
WORK BREAKDOWN STRUCTURE  
[REVISED]  
FBIS MODERNIZATION PROGRAM**

**CONTRACT NO. 84X\*927700\*000**

**03 JANUARY 1985**

**ESL INCORPORATED  
A SUBSIDIARY OF TRW  
SUNNYVALE, CALIFORNIA**

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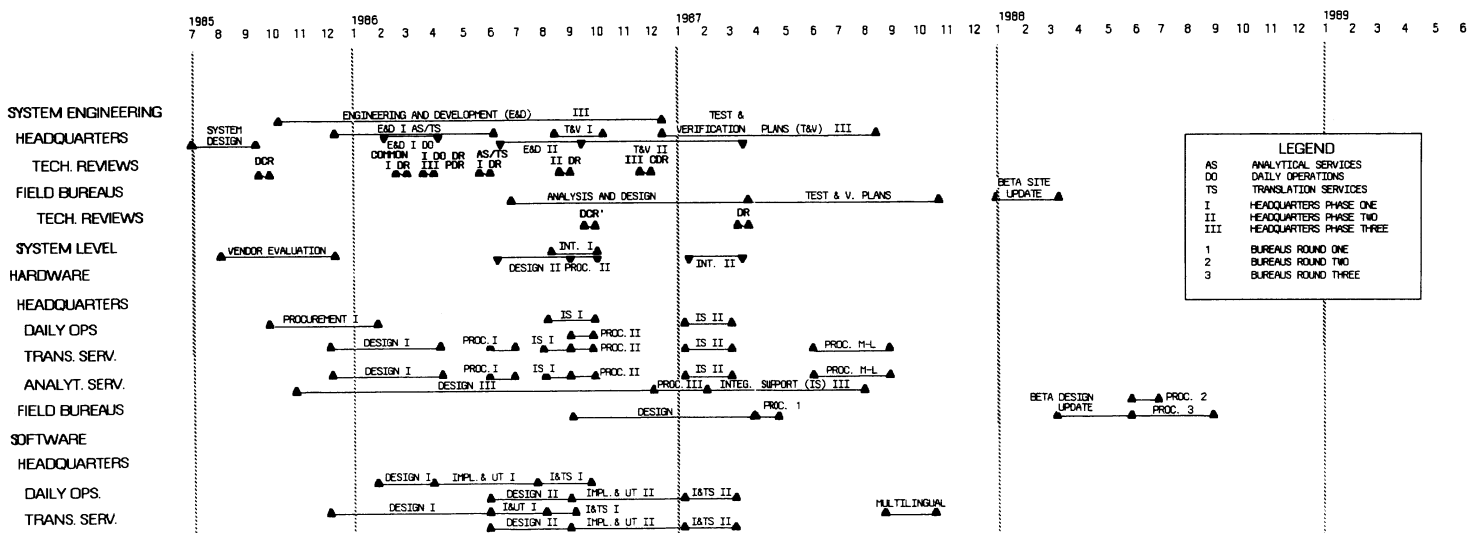
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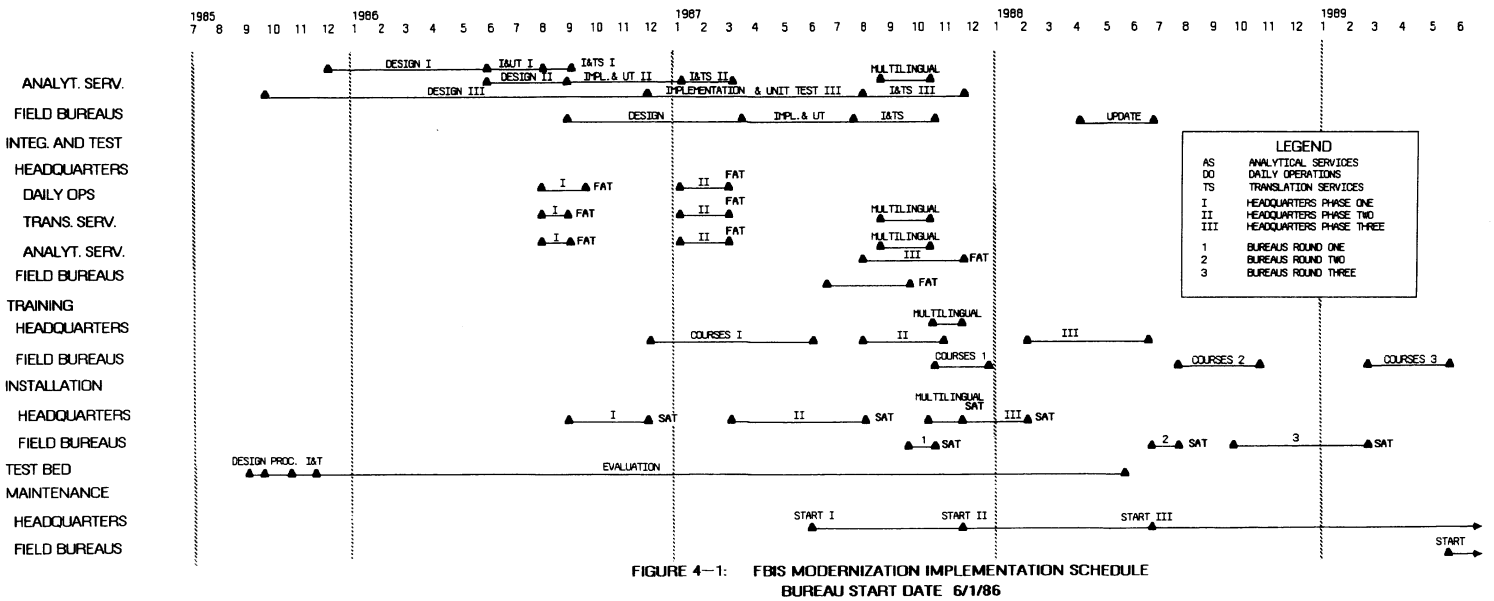
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## SOFTWARE LINES-OF-CODE BY PHASE

	<u>PHASE 1</u>	<u>PHASE 2</u>	<u>PHASE 3</u>	<u>PHASE 4</u>	<u>MULTI-L</u>	<u>BUREAU 1</u>	<u>TOTALS</u>
D.O. S/S	2,000	800	---	---	---	---	2,800
T.S. S/S	9,350	200	---	---	200	---	9,750
A.S. S/S	200	---	18,600	---	---	---	18,800
BUREAU	---	---	---	---	---	17,300	17,300
	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>
TOTALS	11,550	1,000	18,600	---	200	17,300	48,650

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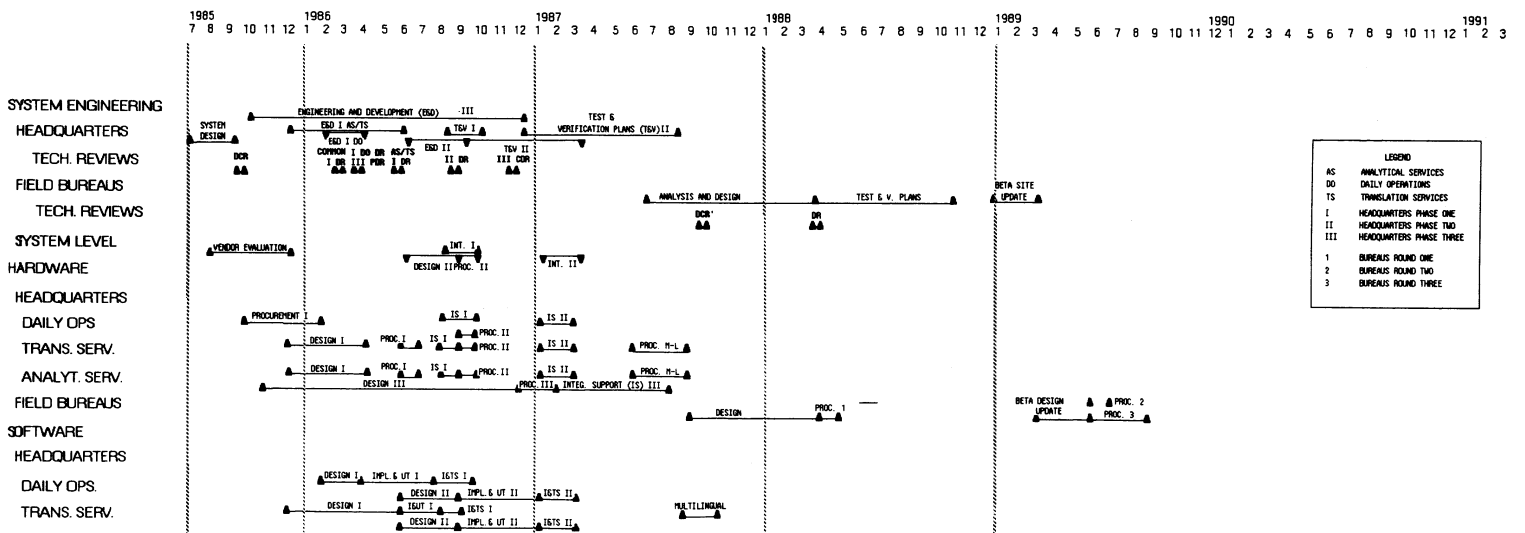
# FISCAL YEAR COST REDUCTION POSSIBILITIES

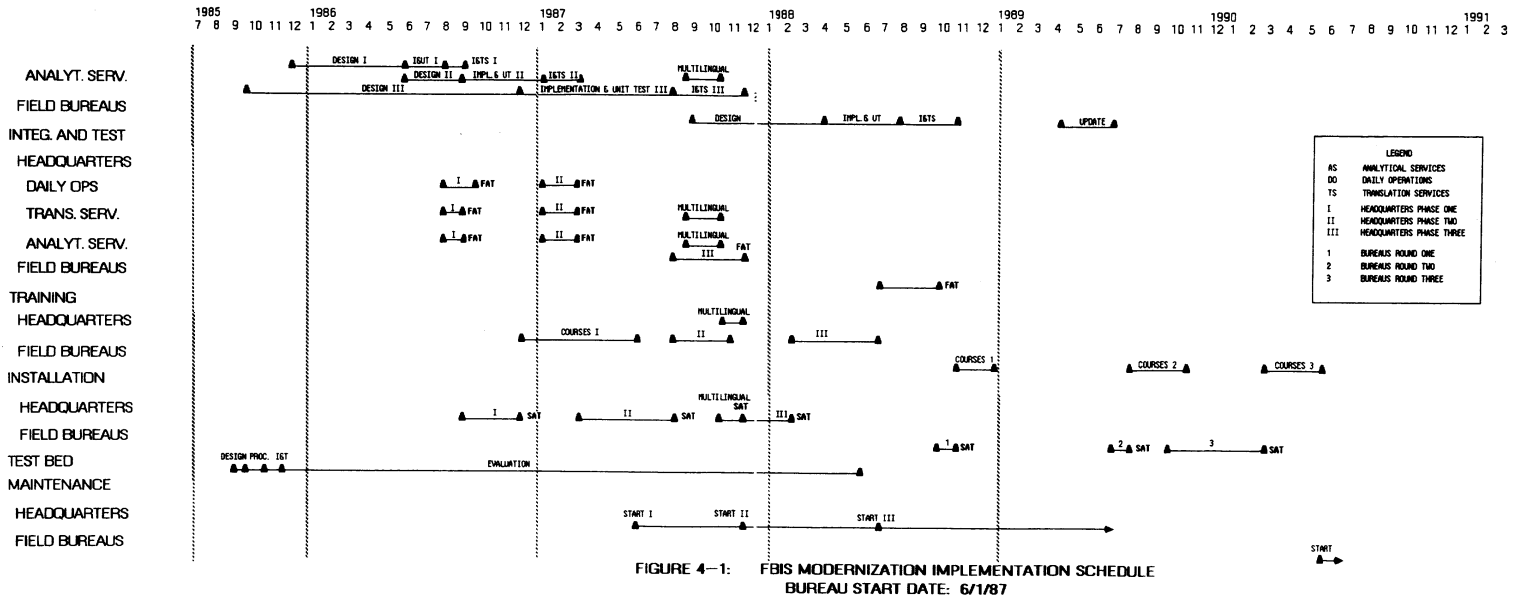
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- 0 EXTEND SCHEDULE BY ANY OF:
  - RESCHEDULE ONE SUBSYSTEM INDEPENDENTLY OF OTHERS (THROUGH ALL OF ITS PHASES)
  - RESCHEDULE ONE PHASE RELATIVE TO EARLIER PHASES (TO INCLUDE ALL SUBSYSTEMS)
  - RESCHEDULE JUST ONE PHASE OF ONE SUBSYSTEM
  - STRETCH OUT BUREAU UPGRADES OVER MULTIPLE YEARS
  
- 0 RELAX CERTAIN REQUIREMENTS:
  - REDUCE WORKSTATION/TERMINAL COUNTS (POSSIBILITIES AT BOTH BUREAU AND HEADQUARTERS)
  - ACCEPT REDUCED REDUNDANCY AT BUREAUS
  
- 0 (ESL) NEGOTIATE VOLUME DISCOUNTS ON COMPUTER EQUIPMENT

**APPENDIX A**

**ALTERNATE BUREAU START #1: JUNE 1987**



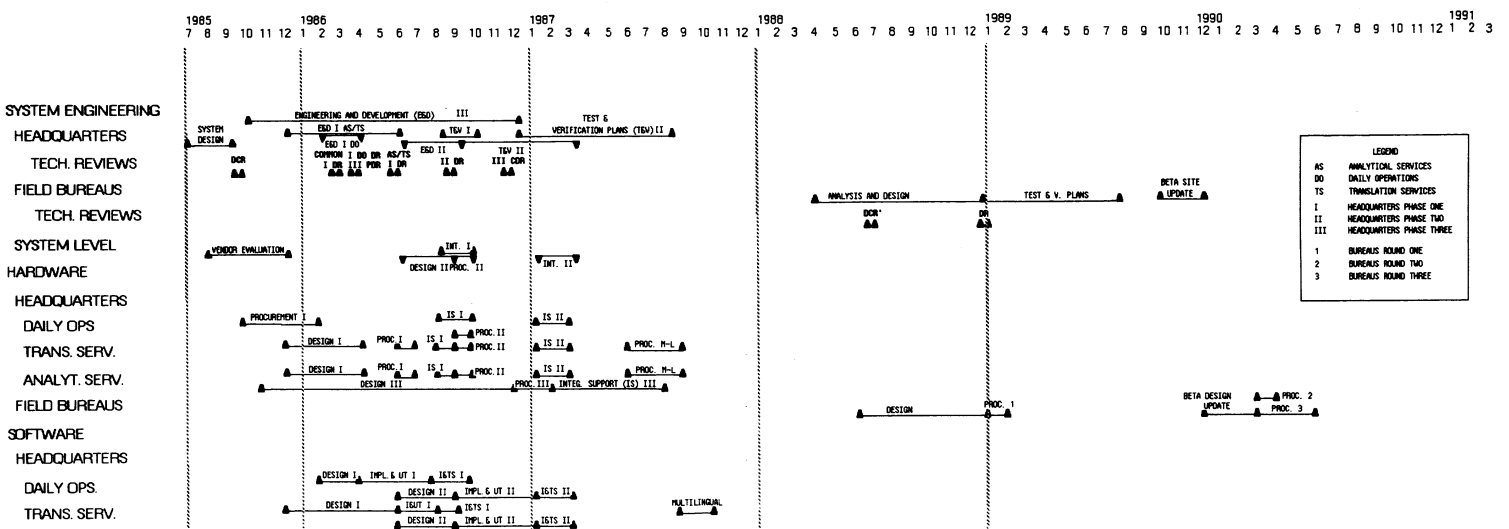


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**APPENDIX B**

**ALTERNATE BUREAU START #2: MARCH 1988**



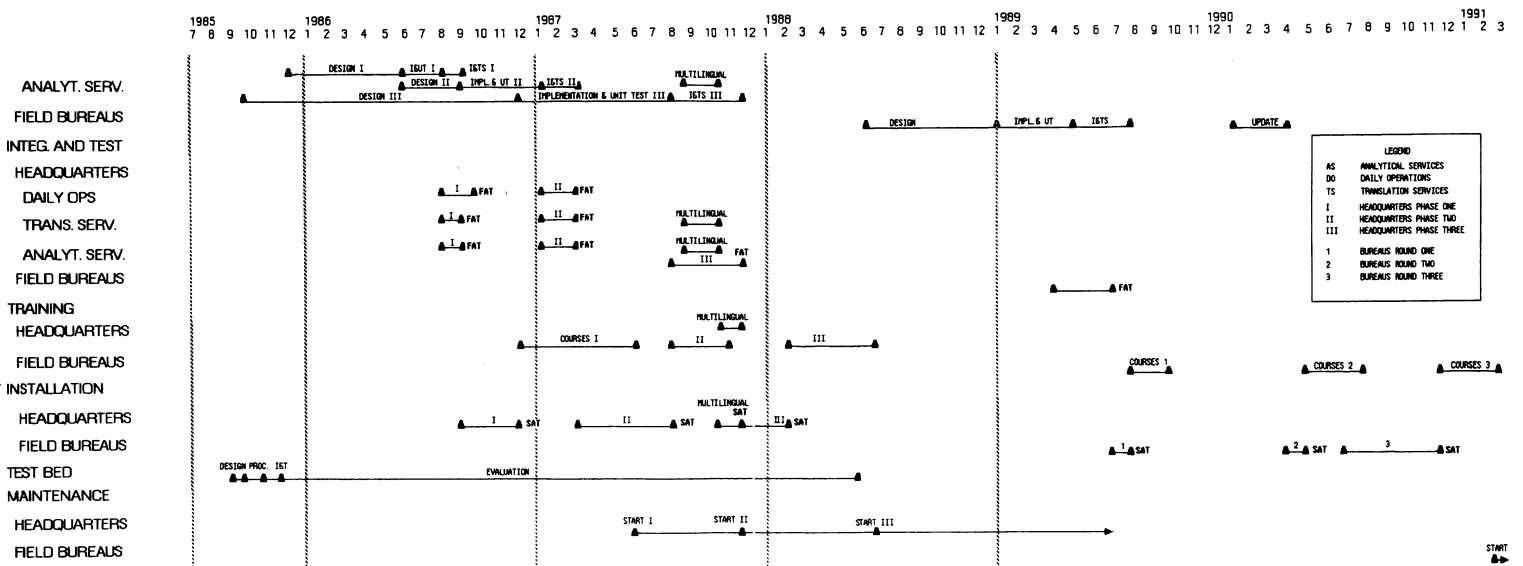


FIGURE 4-1: FBIS MODERNIZATION IMPLEMENTATION SCHEDULE  
BUREAU START DATE: 3/1/88



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**APPENDIX C**  
**BUREAU COST ASSUMPTIONS**

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## BUREAU SOFTWARE EFFORT SUMMARY

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<u>SOFTWARE DESCRIPTION</u>	<u>ESTIMATED LOC</u>
0 WIRE PROCESSING	3,450
0 COMM. PROCESSING	7,100
0 DATA BASE SERVICES	4,250
0 PRINT SERVICES	0
0 TEXT PROCESSING	500
0 ADMIN/AUTOMATION	2,000
	<u>17,300</u>

## BUREAU SOFTWARE DETAILS

---

SOFTWARE DESCRIPTION	ESTIMATED LOC
O WIRE PROCESSING	
- OPERATOR INTERFACE	250
- LINE INTERFACE	250
- CHARACTER FORMAT CONVERSION	500
- ITEM RECEPTION	250
- FILE STORAGE	500
- WIRE RECEIPT LOGGING	500
- INTERACTIVE WIRE FORMAT DEFINITION	1,200
	3,450
O COMM. PROCESSING	
- OPERATOR INTERFACE	250
- FILE FORMAT CONVERSION	750
- DISSEMINATION LIST PROCESSING	500
- MESSAGE FORMATTING	1,000
- CHARACTER FORMAT CONVERSION	1,000
- LINE INTERFACE	250
- FILE STORAGE	500
- COMMUNICATIONS LOGGING	750
- INTERNAL DISSEMINATION	500
- DIGITAL FILE FORMAT CONVERSION	250
- PRODUCE VARIATIONS FOR EACH OF 4 PROTOCOLS	1,350
	7,100

## BUREAU SOFTWARE DETAILS (CONT.)

<u>SOFTWARE DESCRIPTION</u>	<u>ESTIMATED LOC</u>
0 DATA BASE SERVICES	
- STORAGE MANAGEMENT	2,500
- ARCHIVE MANAGEMENT	750
- USER INTERFACE ('RECORD KEEPER')	<u>1,000</u>
	<u>4,250</u>
0 PRINT SERVICES	
* WORD PROCESSOR FILE FORMAT CONVERSION	[ <u>750</u> ]
	0
0 TEXT PROCESSING	
* EDIT/TRACE ENHANCEMENTS TO XYWRITE	[ 1,000 ]
- MENU	<u>500</u>
	<u>500</u>
0 ADMIN/AUTOMATION	
- PERSONNEL/COVERAGE SCHEDULING	1,500
- USER INTERFACE ('TASK KEEPER')	<u>500</u>
	<u>2,000</u>
* --> INDICATES THE REQUIRED SOFTWARE WILL BE PRODUCED AS A HEADQUARTERS DEVELOPMENT ACTIVITY	

APPENDIX D  
HEADQUARTERS COST ASSUMPTIONS

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# HEADQUARTERS SOFTWARE EFFORT SUMMARY

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SOFTWARE DESCRIPTION -----	ESTIMATED LOC -----
O DATA BASE SERVICES	16.600
O COMMUNICATION	7.550
O USER INTERFACE	7.200
	<hr/> <hr/> 31.350

# HEADQUARTERS SOFTWARE EFFORT DETAILS

SOFTWARE DESCRIPTION	ESTIMATED LOC
○ DATA BASE SERVICES	
- DATA ENTRY	3900
- DATA RETRIEVAL	1000
- QUERY MONITOR	2800
- DATA ORGANIZER	2100
- APPLICATION SOFTWARE	2400
- WORKSTATION UTILITY INTERFACE	800
- DEVICE HANDLER	3600
	16.600
○ COMMUNICATION	
- NETWORK INTERFACE & MANAGEMENT	1600
- AUTODIN INTERFACE	800
- WIRE SERVICE INTERFACE	800
- HOST INTERFACE	300
- FILE CONVERSION	2300
- PROCESS CONTROL	1750
	7.550
○ USER INTERFACE	
- GENERAL	1400
- DATA BASE SERVICES	2000
- MANAGEMENT TASKING AND CONTROL	1800
- WORD PROCESSING AUGMENTATION	1300
- PROCESS CONTROL	700
	7.200