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MEMORANDUM FOR THE RECORD

SUBJECT : Analysis of the Soft Copy Terminal RFP (17-78A)

REFERENCES: A. M/F, DD/P, DD/A, C/MS, C/SPS, fm.
D/ODP, subject: Charter for Terminal
Requirements Working Group, dtd
8 April 1977

B. ODP Report, titled: User Requirements
for an Agency Standard Soft Copy Computer
Terminal, dtd 26 Oct 1977

C. ODP RFP, titled: CRT Terminal RFP,
fm. ED/ODP, dtd 1 June 1978

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D. M/F, C/MS, fm. [   ] subject:
CRT Terminal Specifications, undated

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E. M/F, [   ]
subject: Soft Copy Terminal Specifi-
cations, dtd 25 May 1978

F. M/F, C/MS, fm. C/PPC/CSPO, subject:
SAFE Terminal Projections, dtd
15 June 1978

Background

Reference (A) describes the charter for the
Terminal Requirements Working Group set up by the
Director of Data Processing in October 1977. The
objective of the working group was to:

"define the functional requirements of an
ODP user's terminal for the FY-78 to FY-83
period."

Furthermore, the reference states that:

"A common terminal is desired for ODP, DDO, SAFE
and other Agency components. It is also desired
that the terminal be used overseas for accessing
ODP data bases."

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Reference (B) is the final report of the working group. Based on this report, Engineering Division prepared an RFP (Reference C) which has been reviewed by Management Staff.

This memorandum discusses some of the critical issues in the terminal RFP and describes the rationale behind the minimum and evaluation terminal quantities specified in the RFP. It should be emphasized that this procurement has major cost implications. [ ] per terminal, the procurement cost only (excluding maintenance, etc.) is correspondingly [ ] terminals. Considering SAFE minimum requirements, the [ ] figure for the total quantity of terminals through FY-83 is probably low.

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The RFP essentially specifies two types of intelligent terminals; a standard terminal that has the capability to emulate ODP's Delta Data 5260 and one that can emulate a Delta Data 5600 for NPIC requirements. All standard terminals are to be user programmable and have the capability to accept additional memory and peripherals, such as a floppy disk, that the vendor must have available. The standard terminal will be built around a microprocessor and with the enhancements be a stand alone microcomputer as well as intelligent terminal.

A stand alone DD 5260 emulator with enhancements (primarily memory and floppy disk) is described in the RFP as the "advanced terminal." The enhancements will be ordered separately as options and minimum and evaluation quantities are stated in the RFP.

Critical Issues

The following critical issues have been identified in the RFP:

I. Overall strategy of the procurement; ODP's terminal plan including Delta Data replacement and SAFE terminals; the systems life, proposal evaluation plan and level of risk in the procurement.

II. Requirements that support the technical specifications in the RFP; justification for any discrepancies between user requirements and the RFP specification.

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III. Quantity of terminals to be procured; rationale for minimum and evaluation levels.

IV. Estimated costs.

The remainder of this memorandum discusses these issues. The views expressed are reflected in the final RFP and are the result of considerable discussion among Management Staff personnel, ODP's Chief Engineer and the Chief, Engineering Division. Also contacted were the CSPO and the DDO for their current thinking on terminal requirements.

I. Overall Strategy

The overall strategy is to procure a terminal that has a great deal of flexibility and with enhancements (ordered as separate options) can meet most Agency requirements during FY-79 through FY-83. Though the user requirements (Reference B) refers to the terminal as an "Agency standard," ODP's authority to specify an Agency standard is certainly open to question. The RFP does, however, describe a terminal that should meet the requirements of ODP, SAFE (see Reference F), the DDO[1] and NPIC (DD 5600-compatible). It should also satisfy most Agency miscellaneous requirements for terminals and (with available options) requirements for stand alone microcomputers.

The procurement is designed to primarily meet new terminal requirements for FY-79 through FY-83. The RFP specifies the systems life as eight (8) years. This was recommended by Management Staff and incorporated in the RFP because eight years is a realistic systems life from ODP's Delta Data experience. In addition, an eight year systems life will insure that terminals proposed in FY-82 and FY-83 will be offered for purchase and not lease.

The new terminal must also have the capability to emulate the existing DD 5260 terminal since most of ODP's interactive software is designed around that terminal's characteristics. Engineering Division expects that the DD 5260 should remain viable at least through FY-82.[2]

[1]The terminal meets DDO requirements, including CRAFT, but excluding the requirement for an IBM 3270-compatible replacement, see the discussion of Issue II.

[2]See also References A and B, page 1 for this assumption. A key factor in the obsolescence of the DD 5260 is the availability of replacement parts.

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Accordingly, the RFP, in specifying the quantity of terminals for procurement (see Issue III), includes only small quantities of new terminals for replacement of DD 5260's in FY-82 and FY-83. It should be realized that this implies that the majority of ODP's approximately 860 DD 5260's in use by FY-80 will have to be replaced after FY-83 by a separate competitive procurement.

The responses to this RFP will be evaluated on the basis of lowest evaluated cost over the systems life (8 years) among all proposals that satisfy the mandatory requirements. Since, it is not expected that most offerors will have developed the required Delta Data emulation capabilities at proposal time; it will be required that the evaluation team judge the offerors ability to develop the emulation software on the proposed terminal. Engineering Division judges the risk associated with this approach as low to moderate but acceptable.

II. Requirements

Analysis of the mandatory technical specifications in the RFP indicate that they are either explicitly supported by the user requirements (Reference B) or derive from sound engineering and technical judgments made by ED. Reference C provides the source of the requirements for each item cited in the RFP specification. Items that are desirables in the user requirements have either been promoted to mandatory requirements for engineering reasons or cited as mandatory options; i.e., the terminal must have the capability to support the requirement but the specific hardware may or may not be ordered on an individual terminal basis at the option of the Agency.

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User requirements that were not included in the RFP are mentioned in a memorandum from _____ Chairman of the Requirements Working Group (Reference E). Mandatories omitted from the RFP were: 1) IBM 3270 emulation capability (a DDO requirement), 2) provision for a physical lock (OS, FBIS, COMIREX), and 3) access to multiple mainframes from individual terminals (COMIREX). Desirables not included were, 4) different pressures for selected keys on the keyboard (NPIC) and 5) 132 character screen (COMIREX).

It was the conscious judgment of Engineering Division to exclude these requirements from the RFP. Conversations with DDO indicate that they are about to obtain a formal commitment from Processing to satisfy the IBM 3270 emulation requirement through

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modification of ODP host software. Engineering Division believes that to include this requirement in the terminal RFP directly would overly complicate the specification and ultimately restrict competition. [   ] of the DDO has indicated that this approach is satisfactory.

Similarly, access to multiple mainframes, if approved by the Office of Security, will be implemented through modifications to the ODP Communications Network and will not be a terminal requirement. Requiring a physical locking mechanism on the terminal was rejected due to lack of formal OS guidance and the logistical difficulties in managing such a massive key and lock system.

The desirables requiring different key pressures and a 132 character screen were rejected by Engineering Division because they further complicate the specification and, in the former case, are a desirable for a small subset of terminals (NPIC's DD 5600 emulators) and, in the latter case, would severely limit competition at this time.

III. Procurement Quantities

A key element in the overall cost of the CRT terminal procurement is the quantity of terminals and options, by type, specified in the RFP. The RFP specifies minimum and evaluation quantities. The former being essentially an Agency guarantee to the vendor and the latter being "likely high" quantity to be used in determining lowest overall evaluated costs. The vendor is required to pro-vide prices for quantities up to and including the evalua-tion quantity. The actual procurement of quantities outside the minimum-to-evaluation range would imply negotiation and, therefore, uncertain prices. In addition, in order to obtain realistic prices from the vendor, the evaluation quantities should have a reason-able relationship to the minimums.

Clearly, the quantities in the RFP should be judiciously selected. The attachment describes the sources and rationale used in developing RFP terminal and option quantities which are summarized in Table 1.[3]

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[3]See Part II of the attachment for a copy of the quantity tables specified in the RFP.

Table 1: Summary of Total Procurement Quantities

from CRT Terminal RFP (FY-79 - FY-83)

	Minimum Quantity	Evaluation Quantity

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Non-TEMPEST Terminals

Standard { DD 5260 Emulation
DD 5600 Emulation
Advanced

TEMPEST Terminals

Standard { DD 5260 Emulation
DD 5600 Emulation
Advanced
(SAFE)*

TOTAL

5260 DD-Compatible**
5600 DD-Compatible

*SAFE included in TEMPEST Advanced category

**Including Advanced Terminals (and SAFE)

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Three major components in the procurement quantities estimates are the terminals for SAFE, for ODP-funded New Requirements and Delta Data replacements.[4] SAFE requirements are included in TEMPEST Advanced category.[5] Similarly, guidance from the CIA Comptroller, in the opinion of C/P&BG, will limit ODP-funded terminals for new requirements to approximately 110 per fiscal year in the RFP timeframe. Of the 110 terminals, about 95 have been estimated to be CRT's. The latter quantity should be adequate to satisfy ODP-funded new requirements, to the best of our knowledge, except for a slight deficit of an estimated 35 total terminals in FY-80 and 81. In addition, during FY-82 and FY-83, an unknown but significant number of terminals for SAFE should replace some NFAC terminals, freeing them for reuse. An additional factor is that only a limited number of terminals have been included for DD replacements during the RFP timeframe. As mentioned   earlier, this results from the assumption of the usefulness of the DD's at least through FY-82 (see attachment for more details).

Clearly, from the above, the ultimate accuracy of the quantities estimates in the RFP is sensitive to SAFE funding, CIA Comptroller guidance, Delta Data replacement requirements, and budget limitations. Another significant variable will be the ultimate cost of various terminal configurations.

Crucial to the estimates in Table 1 were judgments made that specified the percentage of terminals ordered that would be Advanced and/or TEMPEST. The actual percentage used are summarized in Table 2.

The significance of the quantity of Advanced terminals is that this number is used to develop procurement quantities for the separate options. All SAFE terminals are considered Advanced because of the likelihood of them requiring one or more of the options. Other Advanced estimates were judgments made by Management Staff.

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[4]The ODP-funded New Requirements category excludes terminals for DD Replacements, ODP (Stand Alone), SAFE, CRAFT and CAMS (see attachment).

[5]SAFE evaluation quantities were taken from the minimums in Reference F.

Table 2: Percentage of Terminals by Requirements

Category Ordered as TEMPEST and Advanced

Terminal Requirement Categories	Minimum Quantity		Evaluation Quantity	
	%Advanced	%TEMPEST	%Advanced	%TEMPEST
ODP (New Requirements & DD Replacements)	20%	50%	30%	60%
ODP (Stand Alone)	100%	100%	100%	100%
CRAFT	100%	--	100%	20%
CAMS	--	100%	--	100%
SAFE	100%	100%	100%	100%

The TEMPEST version of the terminal is likely to be significantly more expensive than the Non-TEMPEST version. The percent TEMPEST for ODP New Requirements and DD Replacement terminals has been estimated as higher than the current figure of approximately 40% to provide a cushion to handle components moving out of the Headquarters area. SAFE terminals are considered all TEMPEST in line with the current SAFE "black" concept. Again, other TEMPEST estimates are essentially Management Staff judgments.

The general philosophy guiding the estimate of procurement quantities in the RFP was to keep the minimum quantities conservative and the evaluation quantities realistic high estimates. The attempt was to obtain minimums that would guarantee fair prices and be attainable and evaluation quantities that would attract realistic prices and not be exceeded under normal circumstances. The intent is to achieve realistic quantity ranges that obtain fair prices for the Agency and minimize the possibility of throwing the procurement into negotiation.

IV. Costs

The bottom line question is can we afford the required quantities of terminals specified in the RFP. There is no exact answer to this question until we determine what the costs are. This will, of course, have to wait until all proposals are evaluated. The primary cost controls available will be adjusting, if required, the number of TEMPEST terminals and separate options ordered. Probably, the last resort will be to adjust the overall quantities of terminals to be procured toward the specified minimums.

Conclusions

The CRT Terminal RFP is a very significant and complex procurement. In the dynamic ODP environment, further complicated by the uncertainties in the SAFE program, terminal procurement is fraught with difficulties. The approach taken, specifying a terminal that can be reconfigured and upgraded through procuring separate options, is a sound one. Management Staff is convinced that Engineering Division has done a thorough and detailed job in specifying a CRT that will meet most Agency requirements in the RFP timeframe. The issue of cost will only be resolved after all proposals are evaluated.

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SUBJECT: CRT Terminal RFP (17-78A)

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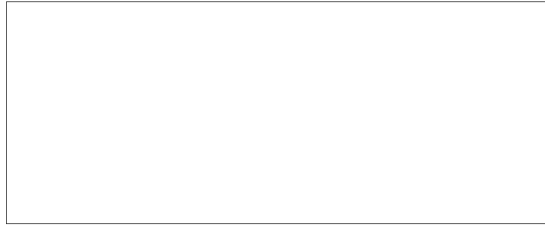
ATTACHMENT

Documentation of the Minimum and Evaluation

Procurement Quantities in the CRT Terminal RFP (17-78A)

Part I

Part II of this attachment is a copy of the tables of minimum and evaluation procurement quantities specified in the CRT Terminal RFP.[1] These tables were developed by Management Staff and Engineering Division and represent the best judgment of both ODP components. Because terminal requirements are an inherently difficult category to project and because of the future budget uncertainties of ODP, DDO (for CRAFT) and, in particular, the SAFE program, the RFP quantity estimates are presented as best current estimates and it is recognized that they may very well be proven inaccurate by future developments.

The RFP provides minimum and evaluation quantities for the Standard terminal (Delta Data 5260-compatible and DD 5600-compatible), the Advanced terminal (DD 5260-compatible) and separate options (primarily associated with the Advanced terminal). The minimum quantity is meant to offer guarantees to the vendor so that a fair quantity for pricing purposes is established. In developing these minimum quantities, we have been intentionally quite conservative, especially when there was a great deal of uncertainty about an estimating component.

The evaluation quantities, on the other hand, represent "likely high" quantities and will be used, as the name implies, in determining the lowest evaluated cost among the proposals. The offeror is required to bid a price for at least as many units in each fiscal year as specified for the evaluation quantity. When in doubt, we have tended to estimate on the high side. This will guarantee the Agency a fixed price on as many units as specified. There is incentive, however, to keep the evaluation quantities reasonable. The greater range between the evaluation and minimum quantities the more the prices may be for the minimum quantity.

[1]From Attachment II, Part 2, "Installation Summary Price Tables" of the RFP

The sources for the RFP terminal procurement quantities are provided in Table I (minimum quantities) and Table II (evaluation quantities) and the associated footnotes. The quantities in the RFP were developed from these tables using Management Staff-developed estimates of the percentages of the total terminal requirements that are Advanced and/or TEMPEST[2] to assign terminals to the RFP categories of Standard and Advanced, Non-TEMPEST and TEMPEST.[3]

Similarly, Table III explains the methodology applied to Table I and II to develop minimum and evaluation quantities for the various Advanced terminal options.

The minimum and evaluation quantities specified in the RFP are, generally speaking, derived from actual customer-supplied requirements. For SAFE, CAMS and CRAFT, adjustments have been made to the range of terminal requirements estimates provided by the responsible components to account for program uncertainties and potential funding limitations. In the case of the ODP (Stand Alone) and DD Replacement terminal requirements, Management Staff has used its best judgment to estimate future requirements.[4] The NPIC DD 5600 emulator quantities were obtained from _____, NPIC, CSD. An extra 10 terminals per year in FY-81 - FY-83 were added by Management Staff to the NPIC estimate for evaluation purposes.

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[2]See % Advanced and % TEMPEST columns in Tables I and II.

[3]In developing the RFP quantities, the terminals in the requirements categories in Tables I and II were allocated into the four RFP categories. In making this allocation, rounding in favor of the TEMPEST and Advanced categories was generally performed and five terminals were considered the minimum quantity assignable to a category. Finally, this procedure resulted in an anomaly in the Non-TEMPEST DD 5260 Emulation category; i.e., the minimum quantities were greater than the evaluation. To eliminate the anomaly in the RFP, the minimum and evaluation quantities for terminals in this category were switched.

[4]See footnotes to Table II, for specifics on methodologies employed to develop evaluation quantities.

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A different approach was required for estimating terminals to meet ODP-funded New Requirements. This category was estimated by following CIA Comptroller guidance of 110 terminals each in FY-79 and FY-80. In the judgment of C/P&BG, this guidance is quite likely to continue through FY-83. Thus ___ CRT terminals annually (an estimated 15 hard copy terminals will also be required) is assumed to be the minimum procurement quantity for FY-79 through FY-83. For evaluation purposes, in FY-83, the Comptroller constraint has been assumed relaxed and ___ CRT's have been specified.

Table IV attempts to estimate the impact of the Comptroller constraints on ODP's ability to meet projected new requirements. A new requirements projection is developed by a detailed process which combines ODP Terminal Questionnaire data (from Reference B) and more recent data (FY-79 - 80) from P&BG/MS and from the DDO/IMS (FY-79 - 82). Details of the process are shown in the footnotes to the table. The result is "The Best Projection of Terminal New Requirements" (Line 7). This projection exhibits a trailing off of new requirements in out-years and, therefore, is potentially suspect.[5] It is, however, the only projection based specifically on user requirements available.

"Terminals Available for New Requirements" are projected in Line 9. This series is derived using the CRT's ordered for FY-79 (___ DD 5260's) as well as assuming a six month lag in terminal installation.

The result is shown in Line 9 as "Terminal Surplus (Deficit)." There is a small terminal deficit in FY-80 and FY-81. However, in FY-82 and FY-83, ___ new terminals[6] for SAFE become available. These terminals should free for reuse the estimated ___ terminals installed in NFAC offices by start of FY-82.[7] The cushion provided by SAFE terminals should allow ODP to meet unplanned requirements in FY-82 and FY-83.

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[5]The trailing-off phenomena is presumably due to the inability of components to clearly identify specific new requirements for out-years.

[6]From SAFE evaluation quantities, see also Reference F.

[7]Approximately ___ terminals are in NFAC offices currently (about 30% of DD 5260's). About ___ terminals (i.e., approx. ___) should be added annually in FY-79 - FY-81, for a total of about ___ terminals by FY-82.

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Table I: DD 5260-Compatible Soft Copy Terminal

Source for Minimum Quantity Estimate

DD 5260-Compatible Requirements	FY-79	FY-80	FY-81	FY-82	FY-83	Total	%Advanced	%TEMPEST*
ODP (New Requirements)[a]								
ODP (DD Replacement)[b]								
ODP (Stand Alone)[c]								
CAMS [d]								
CRAFT [e]								
SAFE [f]								
Minimum Level (Total)								

*%TEMPEST not applicable in FY-79 (TEMPEST not available until FY-80)

a) Terminals to satisfy "new requirements" are for connection to ODP central systems, excluding CAMS, CRAFT and SAFE and, of course, Delta Data replacements and terminals whose primary function will be to act as stand alone microcomputers. Estimates are based on budget guidance of ____ terminals in FY-79 and FY-80 and a P&BG/MS judgment that existing budget guidance will hold through the FY-83 timeframe. (Approximately 15% of the existing ODP terminal inventory (excluding CAMS and DDO's IBM 3270's) consists of hard copy terminals, so the ____ total terminal figure was correspondingly reduced to ____ CRT terminals.) The %Advanced estimate of 20% is an MS judgment. The %TEMPEST estimate of 50% reflects the existing Delta Data TEMPEST terminal percentage (about 35%) adjusted upwards to allow cushion for terminals for components leaving the Headquarters area.

b) This estimate assumes DD 5260's will be viable through FY-82 and ODP will begin replacing them on a small scale (5%) beginning in FY-83. For a discussion of %Advanced and %TEMPEST, see footnote a).

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Table I: DD 5260-Compatible Soft Copy Terminal

Source for Minimum Quantity Estimate

c) Miscellaneous stand alone applications including Office of Finance field applications. Quantities are a Management Staff estimate. All terminals in this category are Advanced and TEMPEST.

d) Minimum quantities are from: M/F, Chief Engineering Division, fm. Chief A Division, subject: Projected CAMS Processing Requirements (TS), dtd 29 March 1978. All CAMS terminals assumed TEMPEST.

e) Minimum quantities are an MS judgment assuming an underfunded program. All terminals assumed Advanced because of stand alone text processing requirements.

f) Minimum quantities are a Management Staff judgment assuming an underfunded program. All terminals assumed Advanced and TEMPEST. Advanced because of text processing and peripheral requirements (Light Pen and Joy Stick).

Table II: DD 5260-Compatible Soft Copy Terminal

Source for Evaluation Quantity Estimate

DD 5260-Compatible Requirements	FY-79	FY-80	FY-81	FY-82	FY-83	Total	%Advanced	%TEMPEST *
ODP (New Requirements) a								
ODP (DD Replacement) b								
ODP (Stand Alone) c								
CAMS d								
CRAFT e								
SAFE f								
Evaluation Level (Total)								

*%TEMPEST not applicable in FY-79 (TEMPEST not available until FY-80)

a) See footnote a), Table I; except some budgetary slack is assumed in FY-83, allowing for 10 extra terminals. The %Advanced and the %TEMPEST have been increasted to 30% and 60% respectively for evaluation purposes.

b) See footnote b), Table I; except 5% of DD population is also assumed replaced in FY-82.

c) Management Staff estimate; see footnote c), Table I.

d) See footnote d), Table I; nominal increase from minimum quantities assumed.

e) See footnote e), Table I. Moderately funded program assumed; some TEMPEST requirements projected.

f) Evaluation quantities are minimum levels from Reference F.

Table III: Methodology for Estimates of Terminal Option Quantities*

Terminal Option	Minimum Quantity Methodology	Evaluation Quantity Methodology
Non-TEMPEST 5" Floppy Disk	Minimum requirement from ED	From ED (same as 8" Floppy Disk)
TEMPEST & Non-TEMPEST 8" Floppy Disk Rationale: All ODP Stand Alones) and an estimated 15% of other advanced terminals will be configured for advanced user/text processing applications	Estimated as ODP (Stand Alone) + 15% {Advanced Terminals less ODP (S.A.)} Split 50/50, TEMPEST/Non-TEMPEST except FY-79, all Non-TEMPEST (See Table I, for TEMPEST split discussion)	Same methodology as minimum plus 10 in FY-80 and beyond (plus 10 from ED)
BASIC EPROM Larger User Memory Rationale:(for minimum): See Above	See Above	Same methodology as minimum for BASIC EPROM. For Larger User Memory same as minimum, with quantities doubled in FY-80 and beyond (doubling from ED)
Larger Display Memory Rationale (for minimum): Estimated percentage of Advanced Terminal. ODP (S.A.) doesn't require Larger Display Memory	Estimated as 50% of {Advanced Terminal less ODP (S.A.)}	100% of Advanced Terminals lagged in FY-79 & FY-80 (from ED)
APL Character Set Rationale: Approx. 10% of current ODP terminals are APL	Estimated as 10% of { Total DD 5260 Emulators (inc. Advanced) less ODP (S.A.), CAMS, CRAFT }	Same methodology as minimum

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Table III: Methodology for Estimates of Terminal Option Quantities*
(continued)

Terminal Option	Minimum Quantity Methodology	Evaluation Quantity Methodology
Light Pen Rationale: 25% SAFE requirement from ODP/ CSPO	Estimated as DD 5600's + 25% SAFE + ODP Miscellaneous (5 each year, FY-80 - FY-83)	Same methodology as for minimum but ODP Misc. is 5 in FY-80, (10 for FY-81 - FY-83)
Joy Stick	ODP Misc. (see above)	ODP Misc. (see above)
Mouse Rationale: 25% SAFE requirement from ODP/CSPO	Estimated as 25% SAFE + ODP Misc. (see above)	Estimated as 25% SAFE + ODP Misc. (see above)
19.2 KB Rationale: ED estimates of requirement for special applications	No requirement	Estimated as 10 per year, FY-81 - FY-83
Asynchronous Mode	Estimated as one per DD 5260 Emulator (inc. Advanced)	Same as minimum
Synchronous Mode	Estimated as one per DD 5600 Emulator	Same as minimum
DMA Rationale: FY-79 and FY-80 special requirement is for ED development. Requirement for SAFE is an ED judgment.	Estimated as 10 per year in FY-79 and FY-80	Estimated as one per SAFE terminal plus 10 per year in FY-79 and FY-80

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Table III: Methodology for Estimates of Terminal Option Quantities*
(continued)

Terminal Option	Minimum Quantity Methodology	Evaluation Quantity Methodology
Tilting Rationale: Requirement from ODP/CSPO	Est. as on per SAFE terminal	Same as minimum
Power Backup Rationale: Requirement from NPIC via ED	Est. as one per DD 5600	Same as minimum

*Terminal option quantities in Attachment III, Part 2 of the Soft Copy Terminal RFP have
 been estimated using the methodology or taken from the sources described in this table.
 In computing an estimate, individual components of the final estimate are generally rounded
 to the nearest 5 units. The methodologies used are applied to respective minimum and evalua-
 tion terminal quantities as specified in Tables I and II.

Table IV: ODP-Funded New Requirements* for Delta Data

5260-Compatible Terminals and Comparison with Available Terminals

Line No.	Components of New Requirements Projection **	FY-78	FY-79	FY-80	FY-81	FY-82	FY-83
1	Results of Terminal Questionnaire[a]						
2	Updated DDO Requirements[b]						
3	Updated CRAFT[c]						
4	TQ w/updated DDO[d]						
5	TQ w/updated DDO, excluding CRAFT[e]						
6	P&BG/MS Survey w/updated DDO, excluding CRAFT[f]						
7	Best Projection of Terminal New Requirements[g]						
	Requirements vs. Available Terminals						
8	Terminals Available for New Requirements[h]						
9	Terminal Surplus (Deficit)[i]						

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*ODP-funded New Requirements, as used herein, do not include SAFE, CRAFT or Stand Alones (including Office of Finance field applications) and CAMS.

**See next page for lettered footnotes. (NA = not available)

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Table IV: ODP-Funded New Requirements for Delta Data

5260-Compatible Terminals and Comparison with Available Terminals

(Footnotes Continued)

STAT **Support Staff reports that approximately ☐ terminals will be installed in FY-78. An additional 50-60 terminals are on-hand and committed to approved terminal requests. As of May 1978 a moratorium on new terminal requests has been instituted. Under these circumstances, ODP will have available terminals to satisfy its FY-78 requirements. (These figures are in agreement with Line 5, FY-78 estimates.) Whether the FY-78 moratorium will generate significant unplanned demand in FY-79 is not known.

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Table IV: ODP-Funded New Requirements* for Delta Data

5260-Compatible Terminals and Comparison with Available Terminals

(Footnotes Continued)

a. Soft copy terminal requirements as estimated in Attachment II, "Terminal Questionnaire Responses" from ODP's User Requirements for an Agency Standard Soft Copy Computer Terminal, dated 26 October 1977 (includes DDO estimate).

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b. DDO CRT estimates are from [   ] 9 June 1978, they include CRAFT terminals.

c. Break out of CRAFT estimates included in b. above.

d. TQ estimate (Line 1) adjusted for revised DDO estimates.

e. Line 4 with CRAFT estimates removed.

f. Updated DDO and CRAFT data are from Lines 3 & 4. P&BG Survey data, 2 March 1978.

g. FY-79 and FY-80 from P&BG Survey (Line 6); FY-81 - FY-83 from Terminal Questionnaire (Line 5).

h. Available terminals are evaluation quantities in the RFP with only 50% of the order quantity installed in a fiscal year (remainder installed in the following fiscal year). In FY-79, 125 previously ordered DD 5260's are available to meet new requirements.

i. Terminal Surplus (Deficit) (Line 9) is a comparison of terminal requirements (Line 7) and terminals available (Line 8). It should be noted that approximately 600 SAFE terminals become available in FY-82 and FY-83. These SAFE terminals will be installed in NFAC offices and should release for reuse some of the estimated 300 CRT's estimated to be in NFAC offices by year-end FY-81. The released CRT's should be adequate to meet any unplanned requirements in FY-82 and FY-83.

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PART 2 - INSTALLATION SUMMARY PRICE TABLES *

The offeror is required to show the summation of his unit prices into system prices by month over the stated life of the system. A separate Table J should be submitted for each procurement plan offered and titled: Table J - Lease, Table J - Purchase, etc., as appropriate.

    a. Installation Summary Price Table J is essentially a full matrix showing (on the vertical axis) all of the detailed Contract Line Items being offered and (on the horizontal axis) all the months from first installation until the last month of system life. The Table is filled in by entering the monthly price for every line item offered over the full systems life. Prices must reflect deductions for prompt payment discounts, if offered.

    b. Cross Totals are then taken on the rows and columns to check entries. After the monthly offeror totals have been validated, they are adjusted by the appropriate discount factors shown below. The following table assumes end-of-month costs and is based on the present value (discounted) technique at a discount rate of 10% carried to six decimal places. The final total shall be further adjusted by the Government by deduction of the residual value, if applicable.

    c. In completing the Installation Summary Price Table, each terminal will be assumed to be installed on the first day of the fiscal year as follows, unless otherwise specified:

Quantities for Evaluation

Hardware Item	Ref.	First Del. After Award	FY 79	FY 80	FY 81	FY 82	FY 83
Non-TEMPEST Terminal	F.6						
DD 5260 Emulation		90 days					
DD 5600 Emulation Advanced		180					
TEMPEST Terminal	F.6.1						
DD 5260 Emulation							
DD 5600 Emulation Advanced		300					
Non-TEMPEST 8" Disk Dr	F.2.3.3	120					
TEMPEST 8" Disk Drive	F.2.3.3	360					
Non-TEMPEST 5" Disk Dr	F.2.3.4	120					
BASIC EPROMS	F.2.7.3	180					
Larger Display Mem.(1)	F.3.2.12	120					
Larger User Memory(2)	F.9.1/6.1	120					
APL Character Set	F.3.3.2	270					
Light Pen	F.4.2.1	270					
Joy Stick	F.4.2.2	360					
Mouse	F.4.2.3	360					
19.2KB	F.5.1.1	720					

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*From Attachment II, Part 2 of CRT Terminal RFP (RFP 17-78A)

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Asynchronous Mode	F.5.2.1	60
Synchronous Mode	F.5.2.1	300
DMA	F.5.7	90
Tilting	F.8.3	720
Power Backup	F.9.4	270

Software Item   (3)

Monitor	F.2.6	60	1
Control Program	F.2.7.1	60	1
FDOS	F.2.7.5	90	1
Assembler	F.2.8.1	90	1
Debugger	F.2.8.2	90	1
Graphic Package	F.3.2.11	270	1
EPROM BASIC	F.2.7.3	180	1
FDOS BASIC	F.2.7.3	180	1
Text Editor	F.2.4.1	180	1
DD 5260 Emulation	F.7.1	90	1
DD 5200 Emulation	F.7.2	270	1

(1) 5 additional displayable memory pages
(2) 32k total user accessable memory
(3) One time charge for software items

Minimum Quantities to be Procured

Hardware Item	Ref.	FY 79	FY 80	FY 81	FY 82	FY 83

STAT

Non-TEMPEST Terminal	F.6
DD 5260 Emulation	
DD 5600 Emulation	
Advanced	
TEMPEST Terminal	F.6.1
DD 5260 Emulation	
DD 5600 Emulation	
Advanced	
Non-TEMPEST 8" Disk Dr	F.2.3.3
TEMPEST 8" Disk Dr	F.2.3.3
Non-TEMPEST 5" Disk Dr	F.2.3.4
BASIC EPROMS	F.2.7.3
Larger Display Mem.(1)	F.3.2.12
Larger User Memory(2)	F.9.10
APL Character Set	F.3.3.2
Light Pen	F.4.2.1
Joy Stick	F.4.2.2
Mouse	F.4.2.3
19.2KB	F.5.1.1
Asynchronous Mode	F.5.2.1
Synchronous Mode	F.5.2.1
DMA	F.5.7

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| Tilting | F.8.3 | - | 15 | 25 | 50 | 50 |
| Power Backup | F.9.4 | 10 | 10 | 25 | 25 | 25 |

Software Item   (3)

Monitor	F.2.6	1
Control Program	F.2.7.1	1
FDOS	F.2.7.5	1
Assembler	F.2.8.1	1
Debugger	F.2.8.2	1
Graphic Package	F.3.2.11	1
EPROM BASIC	F.2.7.3	1
FDOS BASIC	F.2.7.3	1
Text Editor	F.2.4.1	1
DD 5260 Emulation	F.7.1	1
DD 5200 Emulation	F.7.2	1

(1) 5 additional displayable memory pages
(2) 32k total user accessable memory
(3) One time charge for software

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