

# CONFIDENTIAL

NPIC/P&DS/D/6-828  
8 March 1966

MEMORANDUM FOR: Chief, Production Services Division, NPIC

SUBJECT:  High Resolution Step and Repeat Printer  
(Printer # 2)

1. Recently tests have been conducted at the contractor's plant by P&DS to determine the resolution capability of the breadboard for printer # 2. Using an Air Force three-bar high contrast 800 l/mm target, a series of tests were run on type 8430 film. Results varied from group 8 step 1 (317 l/mm) to group 8 step 3 (397 l/mm) giving an average of about 350 l/mm.

2. The contractor claims that by using an optically flat platen with good ultra violet transmission characteristics and better light collimation that the first model will readily achieve 400 l/mm on type 8430 film. This claim appears to be technically feasible and reasonable.

3. In essence the first model of printer # 2 will be a high resolution step and repeat printer capable of attaining 400 l/mm resolution on type 8430 film, printing frames up to 30 inches in length and up to 9 1/2 inches in width, and incorporating a frame sensing device for automatic operation. The frame sensing device has been tested successfully for printer # 1 at GIBRADA.

4. The  step and repeat contact printer demonstrates the following advantages in advancing the state-of-the-art with respect to contact printing.

a. The ability to produce uniform exposure over a full 30 inch frame is accomplished by the use of a unique traveling mercury vapor light source. The traveling light source (slit) also provides automatic exposure control.

b. The unusual approach of a rolling air bag provides uniform contact between the negative and printing stock and therefore results in a higher resolution flat-bed contact printer than any previous flat-bed printers utilizing a stationary air bag.

c. It provides a significant first step in the partial automation of multi-duplication of selected exposures on a given roll.

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X1  
X1  
5. To date NPIC has expended [ ] on printer # 2 and GIMRADA [ ] on printer # 1. The funds required to complete printer # 2 are \$ [ ] for printer # 1. All costs related to printer # 1 will be paid by GIMRADA. Before P&DS can make a final decision whether to cancel the contract for printer # 2 or approve an overrun/change in scope of [ ] to complete the first model it would be helpful to have a definite recommendation from PSD - the ultimate user. 25X

There are three alternatives:

(1) Cancel the contract and receive no equipment. Termination costs would probably be at least [ ] above the [ ] already expended. 25X

(2) Complete the first model printer and operationally test in PSD.

(3) Complete the first model printer, and under the direction of P&DS test and de-bug at Westover, or a commercial facility and upon demonstrated acceptable performance turn over to PSD for operational use.

X1  
6. We would appreciate your advising us as to your recommendations on the alternatives presented in paragraph 5. by 11 March in order that our contract monitor, who will be visiting [ ] on 14 March, may initiate the proper course of action. 25X

[ ]  
Colonel, USAF 25X

Assistant for Plans and Development, NPIC

Distributions:

Orig & 1 - Addressee  
1 - J.A.P.  
2 - DB/P&DS (99711-3)

X1  
NPIC/P&DS/DB? [ ] (2 Mar 1966)

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Date: 16 AUG 1967

(To be completed and returned to OL/PD/CA&SB/CAS within 5 working days)

PART VI: SPONSORING TECHNICAL OFFICE

Technical Office NPIC

Project Monitor

25)

X1

Name of Contractor:

A. Evaluation of contractor's facilities:

Excellent     Good     Fair     Poor

B. Qualifications of technical personnel assigned to Agency projects:

Excellent     Good     Fair     Poor

C. Results obtained by contractor in research and development:

Excellent     Good     Fair     Poor

D. Results obtained by contractor in production type contracts: (NA)

Excellent     Good     Fair     Poor

E. Timeliness of results, reports or production:

Excellent     Good     Fair     Poor

F. Responsiveness to technical control:

Excellent     Good     Fair     Poor

G. Comments:

PART VI: SPONSORING TECHNICAL OFFICE (cont'd)

Over-all numerical evaluation of contractor (see scale below): 5

Scale

- 10 - Outstanding
- 9 & 8 - Excellent
- 7 & 6 - Satisfactory
- 5 - Fair
- 4 & 3 - Marginal
- 2 & 1 - Poor

☐: If this contractor has only furnished you with standard stock items and you do not wish to evaluate him, please check this box  and return this form.

SECRET  
(When Filled In)

SPEED LETTER	REPLY REQUESTED	DATE
	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	8/15/67
		LETTER NO.

TO : NPIC

ATTN:

FROM:  OL/PD/CAS

*Pls. review attached request & indicate concurrence/applicable comments below.  
Thank you*

SIGNATURE

REPLY

DATE 18 AUG 67

*The attached "request for publication release" has been reviewed by  of GIMRADA and the undersigned. There is no objection on our part to release this item for publication provided the first sentence in the last paragraph is changed to read: "The photo-printer will be primarily used to make high quality prints of photographic transparencies while safeguarding the original photograph."*