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TECHNICAL EVALUATION OF
PRINTING INDUSTRY FOR A JOINT VENTURE]

SI/LIR/85/S01/11-01

LIBERIA

TERMINAL REPORT

Prepared for the Government of LIBERIA by the United Nations
Industrial Development Organization, acting as Executing Agency
for the United Nations Development Programme

Based on the work of Mr. Mervyn J. Croft, Consultant
on Printing Industry

United Nations Industrial Development Organization, Vienna

This report has not been cleared with the United Nations Industrial
Development Organization which does not, therefore, necessarily share
the views presented.

INTRODUCTION

This report has been produced by the project "Technical Evaluation of Printing Industry for a Joint Venture (SI/LIR/85/801)" based on the work of Mr. M. J. Croft, UNIDO consultant.

The consultant carried out his assignment in 2 weeks starting from 20 August 1985. The official request for the project was received by telex misc 717 dated 5 July 1985 from UNDP Office in Monrovia.

The development objective of the project was to promote indigenous small and medium-scale industries. The immediate objective was to assist the National Investment Commission in evaluating joint venture proposals and the share value of the Government of Liberia for the proposed re-establishment of the Central Printing Incorporated (CPI), a government owned medium sized printing industry.

CPI was established by the Government primarily for catering requirements of the Government and to use any spare capacity for commercial purposes. However, its operation has not been viable for various reasons recently. In order to improve its functioning, the Government has decided to involve private investment and to operate the press as a joint enterprise. Two offers have been received for the joint venture so far: one from an Italian firm and another from an existing firm in Monrovia. In order to evaluate the proposals and fix share values of the Government and the participating firm, the evaluation of the assets of CPI was required and UNIDO's technical assistance was requested under the Special Industrial Services Programme.

REPORT ON THE CENTRAL PRINTING INCORPORATED

1.1 THE BUILDING

The building is in a poor state of decoration, both internally and externally. Many of the window glasses have been broken. On the ground floor these should not be replaced. These ground floor windows should be bricked up completely, thus saving air conditioning and eliminating a major source of dirt.

1.2 THE AIR CONDITIONING

The Air Conditioning is in disrepair. Only one unit is in workable order. As this is in the old letterpress area, it is rendered useless to the plant. The result is a musty, humid atmosphere, which is not conducive to a good working environment, or to the storage of perishable items such as film and chemicals. The paper is also rendered unstable.*

This humid atmosphere has helped contribute to the considerable deterioration of the machinery. I would suggest new, roof mounted units, with ducting to all areas. This will mean that essential maintenance can be done outside the factory space, and will leave a quiet, easily cleaned work space.

New units are essential.

1.3 HOUSEKEEPING

There is a considerable amount of dust and dirt in the factory. Floors, walls and ceilings are harbouring large amounts of dirt.

1.3a FLOORS

The factory floor must be thoroughly cleaned and then sealed off with the appropriate rubber or plastic based sealants, as soon as possible.

When something is moved around, or simply by people walking around, dust is disturbed with resultant bad work.

* pls. see page 2, 1.5

1.3b CLEANLINESS

It is an essential part of everyday good house-keeping, that the factory area be kept as free from dirt as humanly possible.

An operative must be assigned to damp-dust the working space throughout each working day. The area must be thoroughly washed each work-day evening. This will help reduce air-borne dust particles to a minimum, enabling a uniform quality of print to be maintained.

1.4 RECEPTION AREA

The reception area must be completely re-arranged to facilitate total security.

Security locks should be installed to keep out any unwanted or unnecessary visitor.

The result will be to enhance security, and to keep the factory as free from disturbance as possible.

1.5 PAPER STORE

The Paper Store is dirty and humid, and not at all conducive to conditioning paper prior to printing. The result is an unstable material which is guaranteed to give machine downtime.

* Paper is hygroscopic. This means it takes in, and gives off moisture which is present in the atmosphere. When it takes in water, it will stretch. Shrink when drying out. It must be kept stable.

The factory needs a storeman, whose sole responsibility it is to issue paper, chemicals, plates and all consumable items. He should also report on stock levels, for re-ordering and any expired dates on stock. Often, when an expiry date is due, the stock can be sold to the market which enables you to have prime stock at all times.

1.6 FILM AND CHEMICAL STORE BEHIND CAMERA ROOM

Completely devoid of stocks of chemicals or film. This would have deteriorated any way due to the lack of Air Conditioning or temperature control, in this area.

1.7 CAMERA DEPARTMENT

Dirty, and totally unsuitable for handling a precision material such as presensitized film. This dirty environment results in extra work in "spotting out" of dust particles which are attracted to the film, like iron-filings to a magnet. The dust is simply etched out of the film's emulsion as though it were part of the image to be copied.

There is no Air Conditioning in this area which results in unstable chemical baths, used during processing of the film.

There has to be a constant temperature maintained in this area. The manufacturers of the film and chemicals recommend an optimum temperature, plus or minus a few degrees. These instructions are not being followed. In higher temperatures, chemicals degenerate at a faster pace. At lower temperatures, development is noticeably slower.

Machinery is broken, and is not being repaired. The small camera has been down for two years awaiting essential spare parts. An unacceptable situation.

1.8 BINDING AREA

Virtually non-existent, except for the scattering of binding equipment into remote areas of the factory.

This area needs a completely new appraisal.

1.9 FILM AND CHEMICAL STORE

Dirty and untidy, the department is served by safe-light at all times, which is completely unnecessary as all film is in light tight bags which are secured into light-tight boxes.

In any case, you should be using daylight film, which is a slow-acting film, which can be handled quite readily in a subdued daylight area.

Of far more danger is the uncontrolled temperature of the department due to lack of air conditioning and the fact that there are cracks in the walls through which daylight shows quite brightly, and dust gains entrance.

1.10 MECHANICS ROOM

Dirty, with a considerable amount of completely unusable scrap in every spare space.

1.11 PLATEMAKING

The platemaking and film storage areas are dirty and untidy. Used negatives are abandoned in corners of the room and will be useless if they are required again, if indeed they can be found.

The NuArc platemaker is dirty and there are no negative positioning clips in evidence. Sinks are dirty and there is no running water available to develop the plates. Operatives are required to carry water in buckets from other areas of the factory for this purpose.

There appears to be no opaque paper for the positioning of exposed negatives prior to platemaking.

1.12 TYPESETTING

The typesetting and Art department is ill-equipped for the duties they are being asked to perform.

The equipment in use was not designed for this purpose. (See machinery). Much of the equipment in evidence, has never been used in this establishment.

The Compugraphic film strips in use are badly faded and are in urgent need of replacement.

The film processor is not working and the exposed paper has to be dish developed by hand.

1.13 LETTERPRESS

This section is obsolete and is wasting valuable factory space. It should be removed as quickly as possible.

1.14 MACHINE ROOM

The machinery is dirty and in too many cases is rusty also. The Solna 225 and the Harris V15A have so far escaped the rust, but may not do so for too much longer unless they are cleaned and essential maintenance done on a regular basis.

The general appearance of the department leaves much to be desired. It is perhaps only working to 1 or 2 percent of its true capacity.

There is also a distinct lack of work inside the factory. We are creatures of habit, and it is not good for us that we get into lazy habits.

2.1 MACHINERY

The machinery in general is in a neglected state.

The following is in my opinion a fair appraisal of its condition and value.

2.2 LINOTYPE

The two linotype machines are rusty and have been stripped of parts, rendering them useless.

The magazines and matrices are missing.

Value nil.

2.3 MONOTYPE SUPERCASTER

One Monotype Supercaster. Used for casting display type from 14 points and upwards, and for leads, rules and borders.

Rusty, but could be salvaged if a buyer could be found, which is highly unlikely as most printers have abandoned Letterpress in favour of offset litho.

There are no matrices or wedges.

Value \$1,000.00

2.4 GALLEY RACKS, ETC.

Miscellaneous galley racks, cases of type, composing frames, imposing stones, quad and space and lead bins and racks.

Value nil, except for scrap value of type metal.

2.5 PROOFING PRESS-LETTERPRESS

Although usable, the press is in a poor and rusty condition.

Value nil.

2.6 SAW

Circular saw in poor and rusting condition only useful for cutting strips of soft metal or wood.

Value \$100.

2.7 HEIDELBERG CYLINDERS

Two Heidelberg Double Crown Letterpress machines. Rusted and stripped of parts.

Value nil.

2.8 METAL SMELTER

One Funditor metal smelter.
Not used for some considerable time but appears to be in a workable condition.

Value \$500.

2.9 SOLNA 124

One Solna 124 single colour offset press. Rusty and in a poor condition.

Value \$2,000.

2.10 SOLNA 225

One Solna 225 two colour offset press. In quite good condition although dirty and generally not cared for.

Value \$8,000.

2.11 MIEHLE

One Vertical Miehle Letterpress machine. Rusty, stripped of parts and in unusable condition.

Value nil.

2.12 MULTILITH

Two small-offset Multilith machines. Although working, these machines are in a poor state of repair.

Value \$3,000

2.13 HARRIS

One Harris V15A web press. Single colour perfecter or two colour recto offset press.

Not cared for generally but so far has not succumbed to the rust. Dirty and in urgent need of blankets.

Value \$60,000/65,000.

2.14 GUAGE

Type-high guage. A relic of Letterpress days.

Value nil.

2.15 NU-ARC CAMERA

NuArc Horizontal camera. In poor condition but still in working order. Bellows filthy.

Value \$4,500.

2.16 NU-ARC CAMERA

Small NuArc Camera. Not working for two years due to delay in obtaining spare parts. Could be made to work.

Value \$2,000.

2.17 PLANNING AND STRIPPING TABLES

In poor condition with glasses broken and badly scored.

Value \$500.

2.18 HUARC PLATEMAKER

In neglected condition

Value \$3,000

2.19 SINKS

Sinks are in general disrepair. No running water for platemaking.

Value \$500.

2.20 MISCELLANEOUS BINDING MACHINERY

Polygraph folder, wire stitcher, Rollem, punches.

Neglected but still in order

Value \$4,000

2.21 GUILLOTINES

Two manually operated guillotines. Poorly maintained and in dangerous condition without guards.

Value \$4,000

2.22 MINABINDA

In good condition though dirty and in need of essential maintenance.

Value \$30,000

2.23 KNIFE SHARPENER

Dirty, but in good order

Value \$3,000.

2.24 LATHE

In good working condition though dirty

Value \$15,000.

2.25 DAMPER ROLLER CLEANER

Dirty but in good repair.

Value \$2,000.

2.26 COMPUGRAPHIC UNIT

This unit is being used completely out of context.
The equipment is for typesetting headlines only.

What is happening now is that body text is being
set on the machine and then is cut into small
strips and pasted down individually.

It is costly in materials, time and effort.

The end result, no matter how conscientious the
workers, has to be second rate.

Value \$10,000.

Precessor for above is not working. The machine
out-put has to be dish developed by hand.

Value \$1,000.

2.27 HEADLINER

Udlow headliner with cassettes. Has never
worked in this establishment, if ever.

Value \$8,000.

2.28 COMPUGRAPHIC FILM STRIPS

Badly faded through excessive use. Now poor
quality.

Value nil.

2.29 WAKER

Value nil.

The foregoing is, in my opinion, an objective view
of the machinery assets of CPI.

In making this survey I must note that although some
of the equipment has no book value, it still has a
valuable part to play in the current day-to-day
running of C.P.I. However incompetently that role
may be performed.

I put the value of the machinery and equipment at
C.P.I at between \$160,000 and \$170,000.

THE SABANOH PRESS

The Sabanoh Press is a tidy, jobbing press in Monrovia, with approximately 25 workers, on day and night shifts.

They produce magazines, newspapers and general jobbing work for the commercial community in Liberia.

They appear to be fully competent in their production of jobbing work, but the words magazine and newspaper must not be taken too literally. News-sheet is perhaps more appropriate.

Typesetting is limited and the range of faces available is small.

Printing is by letterpress platens and by small to medium sized sheet-fed, single colour presses.

Their whole experience is limited to the Sabanoh Presses in Sierra Leone and Monrovia.

The concept of new technology has not occurred to them. In jobbing printing, new technology has no place.

The following is an evaluation of the value of the machinery and equipment at Sabanoh Press.

THE SABANOH PRESS

VALUE OF MACHINERY

Heidelberg platen	10x15	\$ 8,000
Heidelberg platen	13x18	9,000
GTO		20,000
KOR		20,000
KORD		18,000
Polar Guillotine		15,000
Perforating & Stitching machines		5,000
Drill		1,000
Typesetters		25,000
Tables		500
Platemaker		3,000
Sink and dishes		500
Damper cleaner		500
Knife sharpener		2,000
		<u>\$127,500</u>

Paper stocks would have to valued at time of any take-over, according to invoices of purchase.

Only whole boxes or reams should be accepted.

Part reams and offcuts may take years to use up. They gather dirt and are uneconomical in use.

I understand from Mr. Khoueiri, that there is no intention to merge the two presses. One of the brothers will take over management at CPI and by slowly training personnel and making good the machinery, they will begin to make an impression on the present state of the factory.

It is my impression that CPI need an immediate and sustained injection of cash, not this slow build-up proposed by Sabanoh Press.

When the Sabanoh programme is finished, the press will be no better than any jobbing press that is situated in the town.

AN ALTERNATIVE SUGGESTION

CPI was originally intended to supply the printing needs of the various ministries in Liberia.

An alternative suggestion would be to try to succeed with CPI where you failed in the past.

Of course you will not need to have such a sophisticated factory lay-out as has been suggested by AGIS.

Firstly I would start with your management team. You need a factory manager whose experience covers origination and offset machine printing alike. He must in essence be a practical man with the ability to teach his workers and to get the best out of them.

Secondly you must have a quality controller. It will be his duty to vet all materials to assure that only the best is produced, in an efficient manner.

Thirdly you must employ overseers for: 1. Origination, 2. Machine Room, 3. Binding Department. They must be practical people with the ability to teach and to relate to any situation which may occur.

Due to the decay of most of the machinery at CPI new machines in certain key areas are essential.

1. Photo composition.

A Small Photo composition unit with on-line processor is essential. If you intend to make-up newspapers it should be rapid - access. This will save time waiting for output from the machine.

2. Small Offset

A Small Offset machine with a big capacity is essential. Something on the lines of an Apollo, which prints from a reel of paper at 25,000 impressions an hour. It will print either both sides of a sheet or two colours on one side. It also has a letterpress unit.

3. A paper plate maker.

This camera produces plates which are of a plastic-type material. They are simply wrapped around the printing cylinder of the Apollo. It is not at all costly.

4. Medium sized offset machines and also one large 2-colour offset machines are essential.

The foregoing machinery will help compliment the existing machinery which after essential maintenance will be useful once again.

The plant therefore will be:

1. Photocomposition (new)
2. Itec or similar paper plate camera (new)
3. Apollo (new)
4. Camera (new)
5. Negative assembly tables (new).
6. Solna (existing)
7. Solna or Roland A1 2-colour machine (new)
8. Harris web existing.
9. Rollem (existing)
10. Perferator (new)
11. Minabinda (existing)
12. Stitcher (new)
13. Printing Down Frame (new)
14. Contact Frame (new)
15. Negative Processor (new)
16. Plate Processor (new)
17. Bobst cut and crease machine (new)

The above will form the basis for a small press which will be capable of handling everything from small jobbing work to long run magazine and newspaper work.

In addition, the unit would carry its own stocks of paper, chemicals, etc.

The Harris is only a half-sheet press and therefore is not large enough to produce a newspaper without additional hand work in the Binding Department.

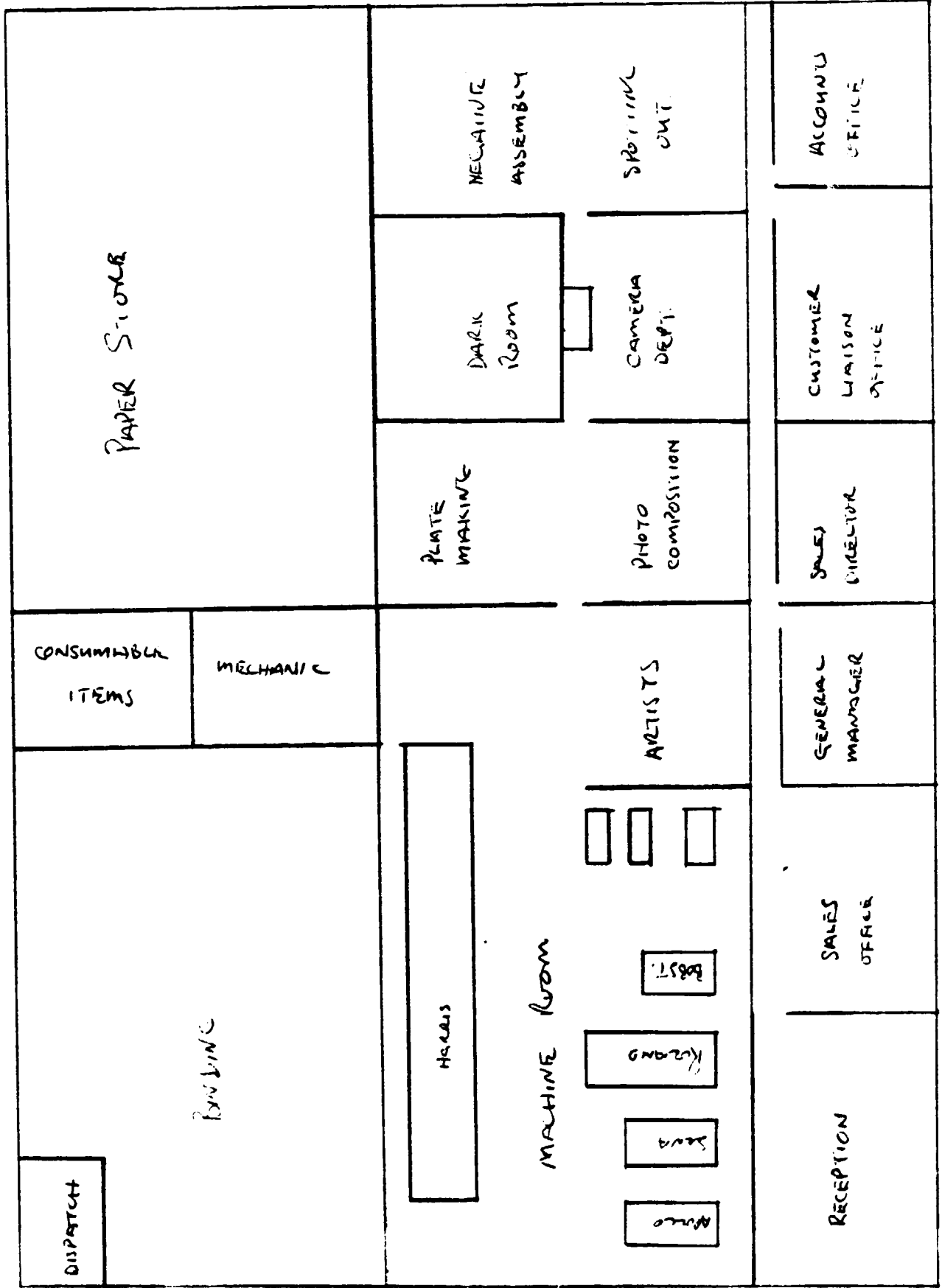
The factory is in urgent need of decoration.

The Air Conditioning is in urgent need of replacement.

I think that in total, to have an efficient well managed printing factory you will have to spend around \$750,000 to \$1 million.

In addition you will have the salaries of five expatriate managers together with their living accommodation, air fares, etc. This latest item will of course come from profits.

REAR VIEW NEW SPACIAL OF CRT



THE AGIS PROPOSAL

I have evaluated the CPI Plant.

I have visited the Sabanoh Press and had lengthy talks with Mr. Khoueiri.

I have evaluated the Sabanoh Press, its machinery and equipment, and its proposed merger terms.

I have also made an assessment upon the AGIS proposal.

The gap between the two propositions is tremendous.

AGIS is offering an entirely new generation in printing technology. It will be unique to Western Africa if not to the whole continent.

Sabanoh Press have a bicycle. A nicely maintained, well oiled bicycle. But a bicycle nonetheless.

AGIS are offering a Rolls Royce-complete with chauffer.

Their proposal to install the very latest in printing technology at CPI and to instruct nationals of Liberia in its use, both in Italy and in the CPI factory is faultless. They propose to use their own personnel only in key overseeing areas.

In time, once this new technology has been thoroughly learned, I am sure that the overseeing duties will be taken over by nationals also.

Liberia will retain Chairmanship of the Board of Directors and therefore retain effective control of the Company. In addition, the second in command in CPI management structure will also be a national.

The Liberian Government, in particular, the Ministry of Information, need such a press.

AGIS are prepared to spend \$1½ million on new machinery. By the time they have turned the factory into a suitable working environment, and included stocks of paper and consumable items such as film, chemicals, ink, etc., it will be closer to \$2 million.

With such a large sum involved, AGIS can see the obvious need for such a plant in Africa. They will make profits. The Liberian Government will too.

I have recently been involved with a similar unit in Kuwait. The turnover there is in excess of \$25 million, with a profitability of 45%. The same can happen here.

The existing equipment at CPI will be of very little help to AGIS in their re-organization programme.

The premises will have to be re-shaped, possibly using pre-fabricated sections. The concrete floor will have to be sealed. An effective air conditioning system installed.

They have chosen just the light balance of reprographic and print machinery to make a huge impact on the market as far as quality is concerned. Once they have made their name on the market, they will be looking for faster machinery to accommodate an ever-growing order book. I would suggest that they replace the single colour Harris with a 4-colour Harris Heatset web which will compliment their Roland capacity. It has a 25,000 impressions per hour speed. Printing 4-colours on each side of the sheet. And it comes off in folded sections.

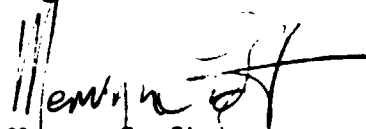
A greater use of daylight film is suggested.

All Government printing must be channelled through the Unit.

Strict guidelines should be laid down as to what the factory should be printing. If it is not done at its inception you may find that the state press - and I think you should keep the name - maybe producing other items that the Government of Liberia would not wish to be associated with.

In conclusion, it is my opinion that there is only one choice for you to make. Sabanoh Press is a jobbing house and will remain so. The only point that I can find to recommend them is their experience with the local market. But I think that this is only a minor point in the overall package, and should not enter the picture in making any decision. It will take them years to pay off arrears and be paying dividends to you. However, if CPI take up the AGIS offer, I could not begin to assess the long term rewards to be gained, such less the prestige of having such an important and far sighted venture in Liberia.

Signed:


Mervyn Croft 2-28-95