PROJECT		PROJECT NO	
POSTCHEQUE PROCESSING UNIT			F 7022

WORK ORDER		WORK ORDER NO	

MANAGER OF THE PROJECT	ENGINEER IN CHARGE OF WORK ORDER
M. PAPO	B. CORBY

DATE AND INITIALS	PROGRESS AND STATUS
June 1956	A Laboratory is created in Holland in order to study the "Postcheque" problem.
December 1957	Mr. Egli is interested by the possibility of using the WWAM as the Processing Unit.
February 1958	Mr. Egli describes the postcheque problem (Ref. Material 1).
March 1958	Mr. Egli investigates different possible solutions and indicates the interest of the WWAM as fitting the requirements of one proposed solution (Ref. Material 2). The French Laboratory considers the possibility of designing a specialized machine with WWAM technology.
April 1958	The first definition of such a machine is given during a meeting held in Paris with Mr. Egli (Ref. Material 3).
May 1958	A detailed program of postcheque calculation is determined by Mr. Egli (Ref. Material 4). Mr. Scharr is asked about the possibility of building a second stick printer. During a meeting held in Amsterdam, the interest of a type WWAM Processing unit is emphasized (Ref. Material 5).
June 1958	The "design objectives" are written by the PPC (Ref Material 7).

PROJECT	PROJECT NO
POSTCHEQUE PROCESSING UNIT	F 7022 Page 2

WORK ORDER	WORK ORDER NO

MANAGER OF THE PROJECT	ENGINEER IN CHARGE OF WORK ORDER
M. PAPO	B. CORBY

DATE AND INITIALS — **PROGRESS AND STATUS**

June 1958
(Cont'd)

The study of the processing unit begins in France with

- information flow chart

- writing the program in the machine language

- layout of the memories

- mechanical and electrical timing

- preliminary engineering specifications.

The details of the calculation to be done by the Processing Unit are discussed with Mr. Egli.

It is decided to design first the machine with a fixed program due to the fact that :

- modifications for each country are not yet known

- if later on it is decided to change the type of programming, the main part of the work will remain unchanged.

The possibility of designing a numerical, 300 LPM Printer derived from the type 421 is taken into consideration.

July & August 1958

Mr. Mork precises that the Processing Unit project must be restricted to an exploratory study.

Mr. Scharr informs us that no work can be done on a second printer before the decision on the postcheque system to be developed.

During their trip to the French Lab. (29 July - 14 August)

PROJECT	POSTCHEQUE PROCESSING UNIT	PROJECT NO
		F 7022 Page 3

WORK ORDER	Planning Work	WORK ORDER NO
		1206

MANAGER OF THE PROJECT	ENGINEER IN CHARGE OF WORK ORDER
M. PAPO	B. CORBY

DATE AND INITIALS	PROGRESS AND STATUS

DATE AND INITIALS

July & August 58
(Cont'd)

PROGRESS AND STATUS

Messrs. Lammers and Pronk study the project of processing unit. Care is taken of their remarks about programming, and about the modifications to be applied for PTT Holland.

The programmation of the postcheque problem on the WWAM is started.

This programmation will be continued by Messrs. Lammers and Pronk if they think a simulation of the postcheque by the WWAM prototype is useful. This simulation could be done by the end of the year.

Design of the Processing Unit goes on by studying the data flow, Program branching and mechanical operations.

September 1958

Tentative design of the processing unit goes on by studying :

- a simplified method of addressing which keeps the possibility of variable word length.

- the input register and buffer (document reader)

- the card read and punch memory buffers

These buffers are part of the main memory and do not use special driving circuits (time sharing interlock)

Drawing of the logical diagram has begun with the data flow, document read circuits and buffer circuits.

October 1958

Drawing of the logical diagram is going on with ring stop and set up circuits, addressing rings, program steps and program branching.

PROJECT WORK ORDER HISTORY FILE

Development Laboratory

PROJECT	PROJECT NO
POSTCHEQUE PROCESSING UNIT	F 7022 Page 4

WORK ORDER	WORK ORDER NO
Planning Work	1026

MANAGER OF THE PROJECT	ENGINEER IN CHARGE OF WORK ORDER
M. PAPO	B. CORBY

DATE AND INITIALS	PROGRESS AND STATUS

October 1958 (Cont'd)

During a meeting held in Paris with Messrs de Vries, Van Rossum and Pronk, the following appears :

- a 514 should be more economical than a 533, but would lead to a slightly lower speed. No practical change would occur in the processing unit.

- instead of only one printer, it will perhaps be decided to use

    - a first 300 LPM printer for the statements
    - a second 150 LPM printer for the balance list.

    The increase of price due to the second version will have to be estimated.

- two versions of the document reader may be investigated.

    In the first one, the Reader may be clutched for every document.

    In the second one, 2 or 3 documents are still read after the Read stop order.

    The increase of price of the second version will have to be estimated.

November 1958

Drawing of the logical diagram tentative goes on with print edit and program branching.

December 1958

Drawing of the logical diagram has reached the point where a component count estimate is possible. This estimate will be undertaken next month.

January 1959

The component count estimate has been done with W.W.A.M. packaging and circuits. The result is shown below and compared

PROJECT	POSTCHEQUE PROCESSING UNIT	PROJECT NO F 7022 - page 5
WORK ORDER	Planning Work	WORK ORDER NO 1026
MANAGER OF THE PROJECT A. DESBLACHE	ENGINEER IN CHARGE OF WORK ORDER B. CORBY	

DATE AND INITIALS   **PROGRESS AND STATUS**

January 1959 (Cont'd)

with the basic W.W.A.M. component count :

	Postcheque P.U.	Basic W.W.A.M. P.U.
Transistors	2062	2829
Power transistors	197	238
Diodes	4978	9244
Ferrites	6149	3749

Mr. de Vries advised us that since the W.W.A.M. project is cancelled, the Postcheque processing unit project is also obsolete.

Work on the processing unit will then be achieved next month by estimating the product cost and writing a final report.

February 1959

The final report including cost estimate has been written (reference # 11). No more development will occur on this project.

IBM
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DEVELOPMENT LABORATORY
19 59 PLANNED PROGRAM

PROJECT POSTCHEQUE PROCESSING UNIT   PRJCT Nᵣ E 7022

MANAGER   M. Papo   PROJECT ENGINEER B. Corby   DATE Sept. 18, 1958
                                                            Revised Oct. 30, 58
DESCRIPTION   March 26, 59

This project covers the design and the building of the processing unit of an
equipment which would solve economically the postcheque problem (daily
up-dating of a file of accounts).

This processing unit uses the WWAM philosophy but is tailored to the job.

This project would eventually be started upon request of Mr. DeVries,
Netherlands Laboratory Manager, who is in charge of the overall postcheque
program. A preliminary study on an exploratory basis is going on until
the end of 1958, in order to determine the feasibility of this project. This
preliminary study was described in the "Postcheque processing unit" Project
File.

1959 Plan -

)   Write a final report on conclusions reached.

DATE	PLANNED PROGRAM AMENDMENTS (REASON OR REFERENCE)	INCREASE (+) OR DECREASE (−)	NEW AMOUNT
9/18/58	ORIGINAL FIGURE PLANNED		$ 110,000
10/30/58	Decision taken in the planned program meeting	− 100,000	10,000
3/26/59	Only indirect manpower is used	− 10,000	−

EXPENSES SUMMARY (THSDS $)	TOTAL	DVPT *	RELEASE		EFFORT (AVRGE MEN YEARS)	1
PRIOR YEARS EXPENSES	.				MODELS (QUANTITY)	−
LAST YEAR	11.6	11.6			TARGET DATES (MONTH, YEAR)	
THIS YEAR'S PLANNED PROGRAM	− .	− .			PROG. START 6/58	PROD.T.END
FUTURE YEARS					ASSY START	RELEASE E.
ESTIMATED TOTAL	11.6	11.6			ENG. T. END	
REMARKS					Final report : March 1959	
* : 10% Fee not included						

COMPANY CONFIDENTIAL

EXPERIMENTAL DEVELOPMENT LABORATORY

COUNTRY ___FRANCE___   DATE __August 8, 1958__

TITLE ___Project Description & Objectives___   SECTION___1___

PROJECT ___POSTCHEQUE PROCESSING UNIT___   PROJECT No. __F 7022__

MANAGER ___M. PAPO___ _(signature)_   PROJECT ENGINEER___B. CORBY___
      (SIGNATURE)   (SIGNATURE)

        The postcheque problem is mainly of updating daily a file of
hundreds of thousands of accounts. From discussion with Mr. Egli
(Product Planning Representative for European P.T.T.), it appeared
that one difficulty in mechanisation of this work is the difficulty to find
among the existing IBM machines an unexpensive processing unit
characterized by :

        - two inputs (file and movement document input)

        - three outputs (updated file output, printed statements of
          accounts, printed list of updated file output)

        - simplicity of the arithmetic processing per account

        - certain flexibility to modify the processing depending on the
          country, but far from control panel possibility.

        From the experience gained by Mr. Egli, it appears that EDPM
equipment, having too high processing possibilities, is unbalanced with
the problem to be solved. Thus these equipments are substantially
more expensive than the present manual processing.

        At the beginning of 1958, Mr. Egli became interested with
the WWAM processing unit, as being nearer to the Postcheque requirements,
and some contacts have been taken with the French Laboratories.

        The discussion brought clear the fact that, rather than to
subtract from the WWAM the unnecessary features, such as :

        - control panel and editing flexibility,
        - alphabetic possibilities,
        - variable word length control,
        - some arithmetic operations (multiplication, division),
        - algebric calculation, etc ...

FORM No. 72-5794-0

IBM WORLD TRADE

COUNTRY _____ FRANCE _____ DATE August 8, 1958

TITLE _____ Project Description & Objectives _____ SECTION 1 Page 2

PROJECT _____ POSTCHEQUE PROCESSING UNIT _____ PROJECT No. F 7022

MANAGER _____ M. PAPO _____ PROJECT ENGINEER _____ B. CORBY
(SIGNATURE)   (SIGNATURE)

it is more economical to consider a specialized machine, keeping the WWAM philosophy, but tailored to the Postcheque requirements.

The proposed unit, purely numeric, consists of one memory of less than 1,000 digits (including input output buffer), a simple arithmetic unit (addition, subtraction, zero and sign test, compare), input output control circuit.

Input output and calculation are checked.

Adjusting of the programming to each country requirements, will be done in factory or by customer engineers, through a built-in modification panel.

The present project is exclusively on an exploratory basis and will be concluded by a component count for product cost estimation of the processing unit only.

Any further study conducting to the realization of a prototype is submitted to the decision of Mr. de Vries, Netherland's Lab Manager. who is in charge of the overall Postcheque program.

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EXPERIMENTAL DEVELOPMENT LABORATORY

COUNTRY ___FRANCE___ DATE _August 20, 1958_

TITLE ___Current Year Objectives___ SECTION___2___

PROJECT ___POSTCHEQUE PROCESSING UNIT___ PROJECT No. _F 7022_

MANAGER ___M. PAPO___ PROJECT ENGINEER ___B. CORBY___
(SIGNATURE) (SIGNATURE)

The objective of this year is to design a preliminary logical diagram of the processing unit in order to make a component count estimation.

Presently the processing unit is designed only to solve the problem as it is described in the report Ref. Material N° 4. When the modifications required for each country are known, the machine project will be adapted to these new requirements, including the modification panel. At that time, it will be decided to make or not the estimation of a version using stored program and able to handle account updating with more flexibility.

The processing unit is intended to be hooked-up to a soft paper punched document input, but a special cost estimate will possibly be made in case of punched card document input.

A standard WWAM control panel simulating as near as possible the functioning of the postcheque processing unit will be established in collaboration with Mr. Egli and Messrs. Lammers and Pronk (IBM Holland).

OBSOLETE

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EXPERIMENTAL DEVELOPMENT LABORATORY

COUNTRY _____FRANCE_____   DATE__December 23, 1958__

TITLE _____Current Year Objectives_____   SECTION_____2_____

PROJECT _____POSTCHEQUE PROCESSING UNIT_____   PROJECT No. ____F 7022____

MANAGER _____M. PAPO _____ PROJECT ENGINEER____B. CORBY_____
    (SIGNATURE)   (SIGNATURE)

Status of the program at the beginning of 1959

A preliminary logical diagram allowing to make a component count estimate is drawn. The processing unit is designed only to solve the problem as it is described in the report Ref. Material # 4.

Current year objectives

To make an estimate of the processing unit described above, and a report describing the machine and the conclusions reached.

COUNTRY	FRANCE	DATE	December 23, 1958
TITLE	Future Objectives	SECTION	3
PROJECT	POSTCHEQUE PROCESSING UNIT	PROJECT No.	F 7022
MANAGER	M. PAPO (SIGNATURE)	PROJECT ENGINEER	B. CORBY (SIGNATURE)

If the decision to use the WWAM philosophy is taken, a prototype of Processing unit will be built using the document reader built in Holland.

When the modifications required for each country are known, the machine project will be adapted to these new requirements, including the modification panel. At that time, it will be decided whether to make or not the estimate of a version using stored program and able to handle account updating with more flexibility.

Presently a choice has not yet been made between soft paper punched document input and special punched card uniform document input. In both cases, 300 Doc. p. m. would be a suitable speed.

Concerning the type of printer, we see four possibilities :

a) using a 300 LPM, 120 position, alphanumerical stick printer similar to the one built for the WWAM model, but with dual feed carriage.

b) designing a 300 LPM, 100 position, numerical wheel printer derived from work done by Mr. L.A. Wilson.

c) using a first 300 LPM numerical printer for the statements, and a second 150 LPM printer for the balance lest.

d) if available in time, the domestic chain printer can be used. In this case a study will be necessary for the chain printer control.

The choice of the type of printer should be done as soon as possible, because in all cases the delivery schedule of a mechanical model is equal to or more than one year.

FORM No. 72-5794-0

EXPERIMENTAL DEVELOPMENT LABORATORY

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COUNTRY	FRANCE	DATE December 23, 1958
TITLE	Future Objectives	SECTION 3-2
PROJECT	POSTCHEQUE PROCESSING UNIT	PROJECT No. F 7022
MANAGER	M. PAPO *(signature)*	PROJECT ENGINEER B. CORBY *(signature)*
	(SIGNATURE)	(SIGNATURE)

Concerning balance card Read and Punch, we propose the use of a 533 with a 14 tooth clutch on the Punch Unit, although a higher speed machine, or a lower price machine type 514 are also convenient.

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COUNTRY ___FRANCE___   DATE _August 21, 1958_

TITLE ___Market Analysis___   SECTION___6___

PROJECT ___POSTCHEQUE PROCESSING UNIT___   PROJECT No. _F 7022_

MANAGER ___M. PAPO___ _(signature)_ PROJECT ENGINEER ___B. CORBY___
(SIGNATURE)   (SIGNATURE)

Market forecast is 150 machines in Postcheque (Ref. Material 2-7).

In the Giro market, this machine will never be a replacement one because no existing IBM equipment is suitable for the Postcheque organizations (see Section 1).

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EXPERIMENTAL DEVELOPMENT LABORATORY

COUNTRY _____ FRANCE _____   DATE August 21, 1958

TITLE __Complementary or pheripheral Projects__   SECTION____7____

PROJECT __POSTCHEQUE PROCESSING UNIT__   PROJECT No. __F 7022__

MANAGER __M. PAPO__ _(signature)_ (SIGNATURE)   PROJECT ENGINEER __B. CORBY__ (SIGNATURE)

A document reader and a suitable printer have to be developed
in parallel with the processing unit (See Section 3).

COUNTRY _____ FRANCE _____   DATE __ August 21, 1958 __

TITLE _____ Machine specifications _____   SECTION _____ 8 _____

PROJECT _____ POSTCHEQUE PROCESSING UNIT _____   PROJECT No. __ F 7022 __

MANAGER _____ M. PAPO _____ PROJECT ENGINEER _____ B. CORBY _____
       (SIGNATURE)   (SIGNATURE)

Preliminary specifications are available (Reference Material N° 8)

Final specifications are not yet established. They will depend on :

- PPC design objectives concerning the calculations to be done for each country,

- Cost estimation of both versions (semi-fixed or stored program).

COUNTRY _____ FRANCE _____

TITLE _____ Project Status _____

PROJECT _____ POSTCHEQUE PROCESSING UNIT _____

MANAGER _____ M. PAPO _____ (SIGNATURE)

DATE August 21, 1958

SECTION 13 (1)

PROJECT No. F 7022

PROJECT ENGINEER _____ B. CORBY _____ (SIGNATURE)

Work is going on designing a processing unit presently limited to perform the program described in Ref. Material N° 4.

The program is re-written in the machine language, and the general arrangement of the machine (timing, block diagram, flow chart, layout of the memory) is determined.

Care is taken to modify the project in accordance with the result of discussion with Mr. Egli (Product Planning representative for European PTT) and Messrs. Lammers and Pronk (IBM Holland).

Messrs. Lammers and Pronk have spent two weeks in the French Lab. to study different possibilities of processing units. They will prepare a report on their conclusions from system engineering point of view.

eptember 1958

Work is progressing on schedule. The logical diagram design has begun this month.

October 1958

Drawing of the logical diagram tentative goes on.

During their trip to Paris (October 1st and 2nd), Messrs. de Vries, Van Rossum and Pronk advise us of the possibility of two version for the printed output (one or two printers) and two versions for the docume reader (clutching possible or not every cycle).

November 1958

Drawing of the logical diagram tentative goes on.

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EXPERIMENTAL DEVELOPMENT LABORATORY

COUNTRY _____ FRANCE _____   DATE December 23, 1958

TITLE _____ Project Status _____   SECTION 13-2

PROJECT _____ POSTCHEQUE PROCESSING UNIT _____   PROJECT No. F 7022

MANAGER _____ M. PAPO _____ PROJECT ENGINEER _____ B. CORBY

(SIGNATURE)   (SIGNATURE)

December 1958

The drawing of the logical diagram will allow the component count estimate in January 1959.

January 1959

Compared with the basic W.W.A.M., the component count estimate shows a 27 % reduction in transistor number, a 17 % reduction in power transistor number, a 46 % reduction in diode number, and a 64 % increase in ferrite core number.

Mr. de Vries advised us that this project is cancelled so that the study will be achieved next month by writing a final report and estimating the product cost.

February 1959

The final report including cost estimate has been written (reference # 11). No more development will occur on this project.

FORM No. 72-5794-0