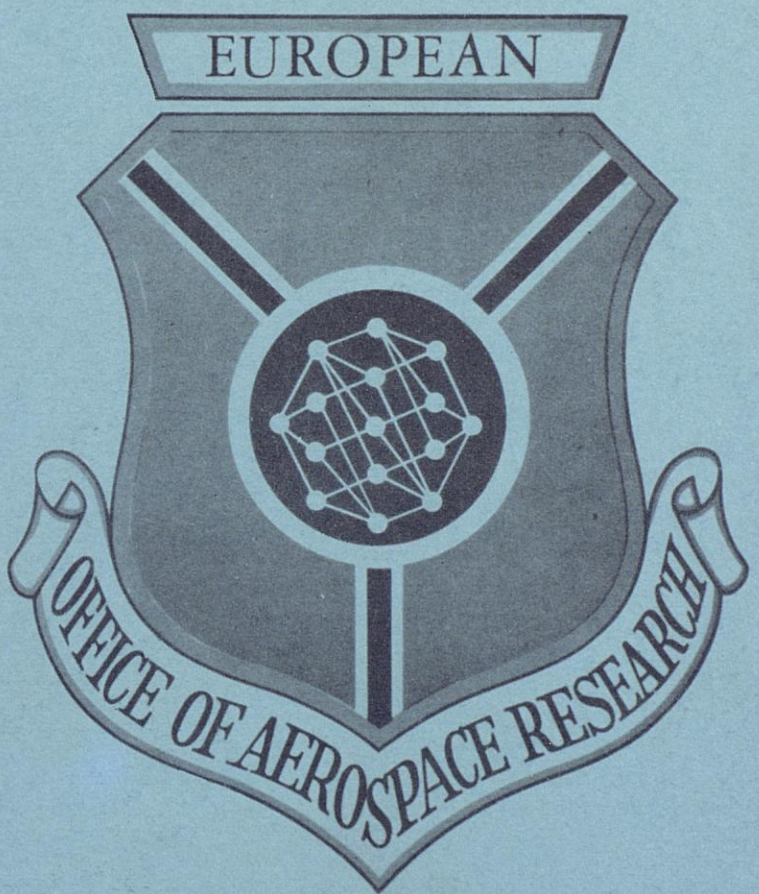
GUIDE FOR PREPARATION OF PROPOSALS

for submission to the UNITED STATES AIR FORCE



EUROPEAN OFFICE OF AEROSPACE RESEARCH
Shell Building, 47 Cantersteen
Brussels, Belgium

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INDEX

JANUARY 1967

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INTRODUCTION

The European Office of Aerospace Research (EOAR) supports research projects in Europe, Africa and the Middle East which may provide new scientific knowledge of value to the United States Air Force. Any program which promises to yield worthwhile scientific knowledge or techniques will be considered.

Any individual or institution may submit proposals to EOAR for review and consideration. Because important decisions regarding research programs will be based on the proposal, it should be prepared carefully. If desired, a scientist may at any time discuss his research program or costs informally, either by letter or in person, with an EOAR representative before submitting a formal proposal.

When submitting a formal proposal, this guide should be used to insure that complete information is supplied. Although some topics may not apply to all projects, furnishing complete information on the pertinent subjects will enable EOAR to process the proposal rapidly and without additional inquiry.

Although research proposals may be submitted at any time, they should be sent to EOAR at least nine (9) months before the preferred beginning date to insure sufficient time for determining Air Force interest. Eight copies of the research proposal should be submitted, to expedite review and evaluation. Proposals should be addressed to:

European Office of Aerospace Research
Technical Operations
Shell Building, 47 Cantersteen
Brussels, Belgium

Proposers will be notified as soon as a final decision is reached.

PROPOSAL FORMAT

(1) Project Title: See page 3 for guidance on the selection of a title.

(2) Legal Title of Organization and Address.

(3) Type of Organization: Profit or Non-profit.

(4) Principal Investigator: Name and academic department of the scientist who will direct the research program.

(5) Contracting Representative: Name, position, office address and business telephone number of the person authorized to negotiate and sign the contractual instrument on behalf of the organization submitting the proposal.

(6) Preferred Starting Date: Date, or a range of dates, on which the proposed research program would begin, if supported. If a specific starting date is considered critical for some reason, a short explanation of the importance of such date should be given.

(7) Estimated Duration: Estimate how many months will be required to accomplish the proposed research.

SCIENTIFIC-TECHNICAL CONTENT

The principal investigator should insure that the technical content of the proposal is presented in a clear, unambiguous manner. This is particularly important since he is usually unable to discuss personally the proposed research with the various scientific personnel who may review the proposal. The technical content should be presented in such a way that a co-worker in the field would be able to understand it completely. The objectives of the proposed research should be clearly stated.

The following outline gives general guidelines for presenting the desired material:

(1) Title: The title of the proposed research should be specific and describe the content as explicitly as possible within the limits of brevity. Avoid the use of such words as "research", "study" and "investigation" since they are implied in any research program. Since the title will be mechanically processed use words which can be duplicated on standard keyboard and computer equipment. If possible, restrict the length to less than 78 typewritten spaces, and avoid the use of superscripts and subscripts.

(2) Abstract: An abstract of the proposed research approximately 200 words or less, should be included. The general objectives and a general discussion of the research program should be outlined therein.

(3) Historical Background: Review the scientific and technical background of related, previously reported work. This is essentially a brief summary of the state-of-the-art. Indicate the point of departure for the proposed research based upon that which has already been accomplished. Include a bibliography of pertinent literature.

(4) Approach: The approach is one of the most important parts of the proposal. It is here that the investigator describes the uniqueness of his approach to the research problem. It is here that previous work he may have done can be related to the feasibility of the approach. Include, as references if possible, any mathematical development or experimental data which amplify the approach or feasibility considerations.

While the abstract summarizes the general aspects of the research, the approach should give a detailed description of the research to be undertaken, the theoretical considerations and experimental techniques to be used, and their relation to comparable work in progress elsewhere. Wherever possible, the specific materials, compounds, systems, data, etc. that will be studied should be identified or described. Any unique features of the proposed research program such as the use of extremely high precision equipment, special handling facilities, special qualifications of the research personnel or the dependence of measurements upon a geographical location should also be included.

(5) Statement of Work: Statement of Work is the term used in a contractual agreement to define the work to be accomplished. For many basic studies, particularly theoretical ones, the abstract will probably be equivalent to a statement of work. For more complex investigations, a detailed outline of the work to be performed may be more definitive as a statement of work. The inclusion of a statement of work in the proposal will assist the evaluating agency in accurately identifying the research to be performed.

(6) Personnel: A short, biographical resume of the principal investigator will be included giving his date and place of birth, educational background, professional experience and information on other senior professional personnel who will be directly associated with the research project. If applicable, the number of students or other assistants, together with information on their level of academic attainment should be listed. The names and titles of other scientific and technical personnel to be directly associated with the project in an advisory or consulting capacity should also be listed.

It is expected that the principal investigator will be responsible for the direct supervision of the research and will participate in its' conduct regardless of whether or not he is to receive any compensation from the contract funds. It is assumed that the principal investigator will be present at the University or Institute during the time period proposed for the research project. Any plans for sabbatical leaves which may occur during this period should be indicated.

(7) Facilities: Describe the major items of equipment and facilities available for performing the research.

COST ESTIMATE

The principal investigator must provide an estimate of the total annual cost, in U.S. Dollars at the current exchange rate, for performing the research. This estimate must show separately the expenses to be supported by the U.S. and the expenses to be supported by the Contractor or other sources. The SAMPLE Cost Estimate on the last page of this brochure may be used as a guide for preparing your budget.

Your proposed budget forms the basis for final decisions regarding level of support, and should be complete and accurate. The research budget must reflect any tax exemptions provided by agreements between the two governments. The following outline describes what information is desired on the budget:

(1) Personnel: List all personnel who will be employed on the research by position; such as project director, research associate, research assistant, etc. Indicate the percentage of time each will devote to the research and the annual salaries they will be paid. Salary rates must be the rates currently being paid by the Institution where the research will be performed, and this fact should be stated in the proposal. You should show the exact method by which you estimated the amounts to be paid by the Air Force. When a certain portion of a person's time is pledged to the research, he must be relieved of a comparable portion of his other duties.

(2) Expendable materials and supplies: Separate your estimate into general categories such as chemicals, photographic materials, electronic parts, glassware, etc. If such a relationship is possible, substantiate your estimate from experience gained over a previous contract or similar project.

(3) Equipment: Normally, the Air Force will not purchase or furnish equipment as it expects the sponsored institution to be fully equipped to perform research. However, if non-expendable equipment essential to the research is impossible to obtain otherwise, the principal investigator may include a list together with the estimated cost. Each major item of equipment must be budgeted at catalog or quoted prices. Wherever possible, U.S. made equipment should be proposed and identified as such in the proposal.

(4) Travel: Indicate destination, number of days per trip, cost per trip, and purpose of the travel (must have a direct bearing on the research). EOAR normally permits reimbursement for transportation costs plus a nominal rate for living expenses.

(5) Report Preparation: Estimate the cost of preparing and reproducing the results of the research conducted under the contract. The results, written in English, will be in the form of Progress Reports. Scientific Reports, a Final Scientific Report, and Reprints of Journal Articles. Although the exact number of copies will vary depending upon the requirements of the sponsoring agency, the following material may be used as a guide in the preparation of a cost estimate:

(a) Progress Reports briefly summarize the status of the research program and are usually submitted every three months in six copies.

(b) Scientific Reports during the research period are not required, but may be prepared when the principal investigator wishes to report significant results or a completed phase of the research program. If you plan to submit scientific reports, estimate on the basis of 100 copies plus one reproducible copy (original typewritten). The reproducible copy will allow the sponsoring agency to reproduce additional copies of the report in excess of those required by the contract.

(c) A Final Scientific Report containing complete methods, results and conclusions, is required at the completion of the contract. Estimate on the basis of 100 copies plus one reproducible copy.

(d) Reprints of Journal Articles are required whenever research results are published in scientific or engineering journals. If you plan to publish the results, include an estimate for publication costs and approximately 50 reprints. This estimate is best supported by identifying the scientific journal, and stating its current page and reprint charges.

(6) Other direct costs: List any other expenses for the proposed research, which are not included in any of the categories discussed above.

(7) Overhead: Normally, overhead costs are expected to be contributed by the contractor. When it is considered necessary to propose overhead costs for USAF support, the charge should be a minimal amount.

Overhead is normally expressed as a percentage of salaries or total direct costs. Overhead costs are those costs which cannot readily be separated and described, such as heating, electricity, building space, administrative support, etc. which jointly benefit the contractor's normal activities and this USAF sponsored research.

THE KEY TO PREPARING A FAVORABLE COST ESTIMATE IS TO DESCRIBE IN REASONABLE DETAIL THE BASIS FOR EACH BUDGET ITEM.

COST SHARING

EOAR does not support the total cost of a research project in the vast majority of its' contracts and grants. It is important for you to identify the additional costs of your research project which are supported or "cost-shared" by other sources (i.e. institution, university, national research organizations, industry, etc.).

The importance of cost-sharing has taken on a renewed emphasis as a result of reduced USAF budgets for the support of overseas research. A high degree of cost-sharing on your proposal reduces the amount of USAF funds required, and therefore, increases the probability of your proposal being approved. EOAR's objective, through the concept of cost-sharing, is to provide USAF support to the maximum number of promising research proposals within the limitations of the EOAR research budget.

The SAMPLE Cost Estimate shown on pages 10-12 outlines one method for presenting the amount of cost sharing in the proposal.

REVERSE GOLDFLOW

"Reverse Gold Flow" is the term used by EOAR to describe the expenditure of funds by EOAR contractors/grantees in the United States or with American companies. Some typical examples of this are U.S. manufactured equipment and material purchases, travel aboard an American carrier, and living expenses for travel within the United States. EOAR's knowledge of the amount of reverse gold flow is important for justifying the USAF overseas research program. As is the case for cost-sharing, the degree of reverse gold flow on any one proposal may have a bearing upon the probability of its approval. You should provide estimates of the amount of reverse gold flow as follows:

(a) Reverse gold-flow within the amount proposed for USAF support.

(b) Reverse gold-flow within the amount cost-shared on the project.

OTHER POTENTIAL SPONSORS

Indicate the names of any other organizations to which this proposal is being submitted.

UNSUPPORTED LEVEL OF EFFORT

Indicate whether or not the research will be conducted if the Air Force does not support the proposal and if so, at what level of effort.

INSTITUTE ENDORSEMENT

The principal investigator and the official authorized to sign for the institution must sign at least one copy of the proposal. All copies should indicate who signed the proposal, giving the official title in each case.

CONTINUATION OF SUPPORT

The EOAR will consider requests for continued support in competition with all other submitted. Consequently, requests for continued support should contain full information as outlined above in addition to a resume of progress to date.

SAMPLE COST ESTIMATE

"Each year's cost should be estimated separately. This form illustrates the degree of detail considered essential for evaluation purposes. Other formats are equally acceptable provided the same degree of detail is shown."

RESEARCH PERIOD _____ to _____	USAF Support	Cost-sharing (non-USAF) Support	TOTAL PROJECT COST
1. SALARIES & WAGES			
Principal Investigator - Dr. W. T. Door, one-fourth time, 12 mos. (1/4 x $10,000 annual salary)		$ 2,500	$ 2,500
Research Associate - Dr. John Doe Full-time, 12 mos. ($6,500 annual salary)	$ 3,000	3,500	6,500
Research Assistants (2 Grad. Students)			
One-half time 9 mos. $150/mo	1,350	1,350	2,700
Full-time summer, 3 mos. $300/mo	900	900	1,800
Laboratory Technician - Mr. John Hall One-fourth time, 12 mos. (1/4 x $4,000 annual salary)	1,000		1,000
TOTAL SALARIES & WAGES	$ 6,250	$ 8,250	$14,500
2. EXPENDABLE MATERIALS & SUPPLIES			
"If such a relationship is feasible, substantiate this area from experience gained over a previous contract or similar project."			
Liquid helium (60 liters @ $6.00 per liter)	$ 360		$ 360
Glassware (prior yr actual experience $300)	350		350
Misc. (Based on historical experience)	200		200
TOTAL EXPENDABLE MAT'LS & SUPPLIES	$ 910		$ 910

	USAF Support	Cost-sharing (non-USAF) Support	TOTAL PROJECT COST
3. PERMANENT EQUIPMENT			
"Estimate by cataloq or quoted prices"			
Signal Generator (ABC Model 606A) - U.S.	$ 1,350		$ 1,350
H. F. Receiver (ABC Model 880) - U.S.		$ 1,575	1,575
Oscilloscope (XYZ Model 130 C)		695	695
Transistor Curve Tracer (Specific model not yet determined. This is a best estimate based on present knowledge)		1,075	1,075
TOTAL EQUIPMENT	$ 1,350	$ 3,345	$ 4,695
4. TRAVEL			
"Indicate destination, number of days per trip, cost per trip, and purpose of anticipated travel."			
One 10 day trip from London to AFOSR in Washington D.C. @ $212 MAC fare plus $150 per diem (to discuss and present results of research) - U.S.	$ 362		$ 362
One 5 day trip to Rome @ $155 plus $75 per diem (to attend Internat'l Physical Society Conf.)		$ 230	$ 230
TOTAL TRAVEL	$ 362	$ 230	$ 592
5. PUBLICATION & REPORT COSTS			
8 pages in Physical Review Journal @ $40/page	$ 320		$ 320
50 reprints to USAF	50		50
Reproduction of USAF reports	200		200
TOTAL PUB. & REPORTS COSTS	$ 570		$ 570

	USAF Support	Cost-sharing (non-USAF) Support	TOTAL PROJECT COST
6. OTHER DIRECT COSTS			
"Itemize and show basis for estimate."			
Computer time - IBM 7094 approx. 20 hours @ $200/hr		$ 4,000	$ 4,000
TOTAL OTHER DIRECT COSTS		$ 4,000	$ 4,000
TOTAL DIRECT COSTS	$ 9,442	$15,825	$25,267
7. OVERHEAD			
"Either a percentage of direct costs or a percentage of salaries & wages which has been established by the institution, university, etc."			
Current University rate - 10% of direct costs			
USAF Support 10% x $9,442	$ 944		$ 944
Cost-sharing 10% x $15,825		1,583	1,583
		$ 1,583	$ 2,527
TOTAL ESTIMATED COSTS	$10,386	$17,408	$27,794

Total Proposed cost to the USAF	$10,386
Total Amount of Cost-sharing	$17,408
Total Cost of Research Program	$27,794
Total Amount of Reverse Gold Flow	$ 3,287

Foot Notes:

(a) Reverse Gold Flow identified by a "U.S."

(b) All salary rates are the current rates established by the University.

(c) All cost-sharing will be contributed by the University, with the exception of $2,000 for permanent equipment received from the National Research Council.