

“Business/Management Plan”

**University of Hawai‘i at Mānoa
University Affiliated Research Center (UARC)**

9 September 2005

Background

At various times over the last year we have been asked to provide a business plan, development plan, management plan, RTRF revenue comparisons, financial model, funding breakdown, etc. for the proposed UARC. This document is an attempt to address these various requests.

In the simplest terms, a maximum of 3.5 million RTRF dollars were appropriated for a return of 50 million federal research dollars (direct and indirect costs) over the next five years. Though, it is clear the actual amount of RTRF expended will be much less. These two statements are not an attempt to trivialize what is a complicated financial package discussed herein. Instead, it is meant to emphasize that the focus of our RTRF investment is on returning research dollars to faculty to conduct research. The intent of the investment is not generating income or to necessarily recover the up-front investment made in the UARC. Though, we note that both are likely to occur and various projections have been made as to how long it might take for this to occur. This is the case any time we spend RTRF dollars to invest in research/scholarship. The return on RTRF investment, whether it is invested in a UARC, a start-up package for a new faculty member, cost-sharing for equipment, seed-funding for a new line of research, etc., in the physical sciences, natural sciences, engineering, medicine etc., research excellence and increased funding for research beyond the invested RTRF dollars. Alternatively, in the case of the those disciplines that do not typically generate significant RTRF dollars (e.g. humanities, liberal arts and social sciences), the expected return of invested RTRF funds (e.g. conferences, start-up, travel, etc.) is solely excellence in scholarship.

We clearly stated over the last few months that our intent was to develop this document and release it as the same time we had completed contract negotiations with the Navy. The rationale was that the two documents are functionally related and in doing so we could use the venue of this document to address specific issues in the contract. However, as we enter the second week of September it is apparent that it may be another week or longer before negotiations on the contract are completed. Therefore, we are releasing this document in advance of the contract and would encourage interested parties to monitor our website (http://manoa.hawaii.edu/mco/initiatives_issues/uarc/) for the release of the contract and follow up discussion or additions to the clarifying questions we have been posting.

This document is divided into two broad sections. Section A is focused on the function/management plan and Section B addresses on various financial issues related to the proposed UARC.

A. University of Hawai‘i UARC: Functional/Management Plan

A.1 Introduction

The UARC constitutes another interdisciplinary funding opportunity for our university. As such, it reaches amongst several colleges and schools building upon the expertise of our faculty and researchers. The research under this contract vehicle will be performed by faculty, researchers and students in these units.

As in any other federally funded project at UH, individual faculty or a group of faculty will serve as the principal investigators for each research project. Technical and professional staff, graduate, undergraduate and postdoctoral students will participate in the research projects as in any other project currently on campus. Faculty, students, professional and technical staff do not need to have security clearances to participate in UARC research projects. Clearances are only required on classified projects. If there are any classified projects under the UARC contract vehicle, the same Board of Regents policies that currently govern all classified research on campus will apply.

Under the University’s own policy for research, Board of Regents policy §5-15 c (2), all research projects at the University must be freely entered into, ensuring research will be voluntary on the part of our faculty.

A.2 Overview of Organization

We envision that the proposed UARC will report to the Vice Chancellor for Research and Graduate Education. We had initially envisioned that it would have the structure of an Organized Research Unit (ORU) but have changed that vision as a result of consultation. The UARC will be managed by an Executive Director. The Executive Director will be a civilian, preferably with strong background in Navy programs. If the proposed UARC is made permanent by the Board of Regents, the Chancellor’s Office will conduct a nationwide search for the Executive Director. The Executive Director will be assisted in long-range planning and vision of the proposed UARC by an Advisory Board that consists of other deans and directors, faculty, community stakeholders, and students. The proposed UARC will be conducting research in four functional areas of: (a) Ocean Science and Technology (OST); (b) Astronomy (AST); (c) Advanced Electro-Optics and Sensing (AEOS); (d) Sensors, Communications, and Information Technology (SENCIT). Each functional area will be headed by a Director who will oversee the research management of the respective area. Finally a Director of Business and Administration will oversee the day to day UARC operations.

In support of the four area directors and researchers and in collaboration with the Office of the Vice Chancellor for Research and Graduate Education, this Office has leadership

responsibility for the planning, direction, initiation, development and coordination of research programs of the UARC.

A.3 Authority

The office of the UARC has the authority to develop new research programs within applicable campus executive and Board of Regent policies, to allocate or reallocate budgets of the Prorated Direct Cost in support of the UARC's functions, to use the Fee funds in support of the research enterprise, to develop new research initiatives, support students and promote the professional enhancement of participants.

A.4 Interactions with other UHM Vice Chancellors Deans and Directors

The Executive Director of the UARC will report directly to the Vice Chancellor of Research and Graduate Education. Given the current four core competencies of the UARC, the Executive Director closely interacts with the Dean of the School of Ocean, Earth Science and Technology, the Director of the Institute for Astronomy, the Dean of the College of Engineering, and the Dean of the College of Natural Sciences.

A.5 Major Functions of the Office of the Executive Director

The UARC will be a virtual Research Unit reporting to the Vice Chancellor for Research and Graduate Education. Faculty in this new program will come from units that are representing the core competencies of the UARC, and they will remain faculty in their home units.

The proposed UARC will have no dedicated building or research facilities. Instead, we will lease a small administrative space at the Mānoa Innovation Center (MIC) that will house the core administrative personnel. The administrative space lease will be paid through the prorated direct cost rate charged across every task order executed by the proposed center. Equipment and maintenance of the research facilities used for conducting research in these facilities is built into task orders. General purpose equipment and upgrade of these facilities is built-in the fee fund of the UARC. The proposed center will provide the funds for the maintenance and upgrade of the research facilities relevant to the projects.

Within the scope of its respective core competencies, the Center, under the direction of the Executive Director will:

- perform research, exploratory development, advanced development, test and evaluation.
- provide independent technical evaluation and advice during the acquisition process.
- serve as systems architects, consultants, and/or technical direction agents during the formative stages of systems developments.
- critique proposed system specifications.

- develop selected systems and subsystems, including prototype or demonstration hardware/software and models.
- plan and oversee the integration of new systems.
- conduct independent quantitative evaluations of operational systems in special cases.
- provide technical leadership in identifying and resolving operational problems.
- provide engineering interpretations of intelligence information in support of system design or evaluation.
- organize collaborative activities and promote other linkages between Navy/DOD, academia, and industry.
- assist in the transfer of technology to industry.
- foster education in engineering and scientific disciplines that are especially relevant to Navy/DOD needs.

A.6 Task Order Preparation

Submission of Task Order to the University of Hawai‘i UARC

Task orders, while received from the DOD, are typically developed in “conversation” with program managers at the funding agency (not necessarily the Navy), the Executive Director of the UARC, and faculty interested and capable of performing the proposed research. The UARC provides a vehicle for faculty to propose research projects/priorities to the Navy or other military and non-military programs.

There has been considerable discussion on the mechanism and review of task orders once they reach this campus. We have previously proposed various scenarios for review of task orders. Currently under consideration is the following as proposed by members of the University of Hawai‘i – Mānoa Faculty Senate Executive Committee:

Proposed UH Task Order Review Mechanism

- [Appointment] Review of task orders for the UARC program shall be conducted by an ad hoc committee appointed by the Faculty Senate.
- [Composition] The committee shall consist of a diverse selection of seven faculty.
- [Charge] The Committee is charged to advise the Vice-Chancellor for Research as to the whether each task order complies with applicable University policies.
- [Reporting] The Committee shall report the results of their review to the Faculty Senate on a quarterly basis during the initial year of UARC operations.
- [Timeline] The Committee will review the task order within five business days from the day of submission.

- [Term and Sunset] The Committee shall be appointed for a term of one year. At the end of a year of operation, the Committee shall advise the Senate whether to institutionalize a review of UARC task orders.

Faculty Response to Task Orders

Faculty can negotiate and prepare responses to the task order of the proposed research effort. Usually a task order response is comprised of a technical Statement of Work and a budget. The faculty will route the task order with the Office of Research Services (ORS) Form 5 as with any other proposal; namely through his/her department chair, the Dean or Director and the Executive Director of the UARC. Fiscal and administrative support will be provided by the UARC and it is built in the proposed rate. During the task order negotiation with the customer the faculty will inform his/her chair of the potential funding opportunity and the estimate of work to be performed under this research effort. The Chair and or the Dean of the Faculty members' home unit will continue to have the final authority of approving the ORS Form 5.

After the ORS form is signed by the Dean and the Executive Director, the task order will be submitted to the University Task Order Review Committee for consideration. In case of approval the task order and the ORS Form 5 returns to ORS for submission to the sponsor.

A.7 Resource Management

Equipment and maintenance of the research facilities used for conducting research in these facilities is built into task orders. General purpose equipment and upgrade of these facilities is built-in the fee fund of the UARC. The proposed center will provide the funds for the maintenance and upgrade of the research facilities relevant to the projects.

The regulations that apply to the usage and ownership of equipment purchased and used under this contract are dictated by the A-21 OMB circular and Federal Acquisition Regulations (FARs). The provisions on equipment on this contract follow the same FARs and A-21 OMB circular that currently are in place for most of federal contracts and grants.

The distribution of RTRF funds generated by UARC projects will follow the same regulations that are currently in effect. The fee funds will be returned to the Executive Director who in coordination with the Vice Chancellor for Research and Graduate Education, Deans, and Directors associated with the core competencies will develop a roadmap of how the fee funds will be used.

The distribution and expenditure of prorated direct cost (PDC) funds will follow the negotiated contract. PDC funds will be predominately used for salaries and employee benefits for central services employees, computing services, communications, and some facility related costs. The UARC will conduct an annual PDC study and the PDC rate will be adjusted based on that study.

B. University of Hawai‘i UARC: Finances

B.1 Introduction

The purpose of this section is to examine the revenue streams to the University using two financial/contractual models. Namely, for the proposed UARC financial model and the existing financial model currently governing grants and contracts at this university. The underlying assumption in this assessment is that all labor, equipment, travel costs, etc (i.e. direct charges), are the same. In other words, the technical statement of work is the same.

To better facilitate the study of the business plans, definitions on Salary and Wages, Services, Supplies, Travel, Subcontracts, and Equipment, Employee Benefits, University of Hawai‘i Facility & Administrative Cost (also known as “RTRF return”), Prorated Direct Cost and Fixed Fee are given in Section B.2.

In Section B.3 the two cases are studied and the Tables provide detailed information about the direct and indirect cost assumptions

B.2 Definitions

Salary and Wages. All salaries are in accordance with University of Hawai‘i (UH) and Research Corporation of the University of Hawai‘i (RCUH) policies. UH and RCUH policies comply with federal and state law and regulation.

The number of research hours affiliated with this salary estimate is determined by calculating the average research hourly rate for each staff category as of January 2005 and dividing total estimated salary costs for a given year by the average hourly rate. The average hourly rate is multiplied by the 3.1% inflation factor each year after FY2006.

Salaries also will be charged to the contract through the UARC Prorated Direct Costs for UARC’s central support staff and effort.

Services, Supplies, Travel, Subcontracts, and Equipment: Procurement of all services, materials, subcontracts, and equipment is in accordance with University of Hawai‘i, State of Hawai‘i, and federal policies and regulations. Travel expenses will be paid in accordance with University and State of Hawai‘i travel regulations as permitted by law and regulation.

Employee Benefits: The employee benefit rates are approved annually by the University of Hawai‘i, State of Hawai‘i, and U.S. Department of Health and Human Services. This proposal applies the currently approved rates.

University of Hawai‘i Facility & Administrative Cost: The University of Hawai‘i Facility and Administrative (F&A) Rate applied to the UARC is lower than the rate used on campus (9.06% versus 36.3%) and does not recover the UARC’s central costs. The F&A rates are established by the University of Hawai‘i and reviewed by Federal auditors/negotiators. These rates are expressed as a percentage of modified total direct costs. This proposal applies an estimate of the provisional F&A rate that will be negotiated for the UARC.

UARC Prorated Direct Cost: The UARC’s central costs are recovered by applying a Prorated Direct Cost (PDC) rate to modified total direct costs. PDC includes expenses such as salaries and employee benefits for central services employees, computing services, communications, and some facility related costs. UARC will conduct an annual PDC study and the PDC rate will be adjusted based on that study, subject to the review and approval of the Navy’s resident administrative contracting officer (ACO). This proposal applies an estimate of the PDC rate that will be reviewed and approved by the ACO.

Fixed Fee: A fixed fee of 7.125% is required to allow the UARC to perform essential functions for the Navy and the Government, including conducting independent research and development work for Navy/Government, ensuring UARC staff employment stability, providing vessels and/or facilities, providing general purpose equipment, providing advanced education and training for UARC staff, and for other UARC business related needs.

B.3 Case Studies

As was stated in the introduction, in order to compare the revenue income in Research and Training Revolving Fund (RTRF), Prorated Direct Cost (PDC), and Fee between the current accounting structure and the proposed UARC Indefinite Delivery, Indefinite Quantity (IDIQ) cost reimbursable plus fee contract, we assume the same level of effort in both case studies.

Case 1: Proposed UARC accounting structure. In the proposed structure there are three “revenue” centers: a) the Research and Training Revolving Fund (RTRF), b) the Prorated Direct Cost (PDC), and c) the Fee. The University is under negotiation with the Navy for these three rates. The proposed rates are:

- RTRF Rate: 9.06% of Modified Total Direct Costs (MTDC) (provisional)
- PDC Rate: 45.1% of MTDC (subject to negotiation)
- Fixed Fee: 7.125% of total direct and indirect costs (subject to negotiation).

It is anticipated that over the 5 year period up to \$50M may be allotted to this indefinite delivery, indefinite quantities contract through a series of separate task orders to perform work as described in the technical proposal. The cost proposal estimates how expenditures for a \$50M contract will be allocated to particular cost categories. The quantities of supplies and services represented are estimates for the schedule only and as

such do not represent purchases. Under the implemented contract, purchases will occur at the individual task order level and each task order will be submitted with its own cost proposal and estimated budget.

Beginning in FY2006, all direct costs are increased by an inflation factor of 3.1%, which is based on the Honolulu Consumer Price Index for the second half of 2003 and the first half of 2004.

Table 1 shows a summary of the budget. It is assumed that the load of work will be distributed uniformly amongst the four core competencies. Table 2 shows the detailed assumptions on all cost centers.

NAVSEA COST PROPOSAL (TABLE 1)
UARC – UNIVERSITY OF Hawai'i AT Mānoa
OCTOBER 1, 2005 - SEPTEMBER 30, 2010

	Year 1	Year 2	Year 3	Year 4	Year 5	Totals
ESTIMATED SALARIES						
Professionals, Faculty	3,442,339	3,629,889	3,742,412	3,858,424	3,978,033	18,651,097
Graduate and Undergraduate Students	320,433	347,988	358,775	369,892	381,361	1,778,449
Support	183,491	220,707	227,550	234,605	241,876	1,108,229
Sub total	3,946,263	4,198,584	4,328,737	4,462,921	4,601,270	21,537,775
ESTIMATED OTHER COSTS						
Services	278,684	287,323	296,230	305,413	314,881	1,482,531
Supplies	735,106	825,867	840,036	865,807	881,028	4,147,844
Travel	199,976	206,176	212,568	219,157	225,951	1,063,828
*Subcontracts	148,124	152,716	157,450	162,331	167,363	787,984
*Equipment	198,204	204,348	210,683	217,214	223,948	1,054,397
Prorated Direct Cost (45.1%)	2,372,273	2,488,595	2,560,585	2,639,837	2,716,432	12,777,722
UARC-UHM Indirect Cost (9.06%)	691,487	725,393	746,377	769,478	791,804	3,724,539
ESTIMATED TOTAL COST	8,570,117	9,089,002	9,352,666	9,642,158	9,922,677	46,576,620
Fixed Fee	629,904	668,042	687,420	708,698	729,316	3,423,380
TOTAL EST COST PLUS FEE	9,200,021	9,757,044	10,040,086	10,350,856	10,651,993	50,000,000

(TABLE 2) BREAKEOUT COST			Year 1					Project Period		Project Period	Project Period	Project Period	Project Period	Total
								10/1/2005	9/30/2006	9/30/2007	9/30/2008	9/30/2009	9/30/2010	FY 06-10
Core Personnel	Role on Project	Calendar Person Hours	Calendar Person Salary	Hourly Rate	Person Hours Charged	Salary	Fringe	Requested Funding	Requested Funding	Requested Funding	Requested Funding	Requested Funding	Requested Funding	
TBN	Director	1800	\$ 170,000	\$ 94	3,600	\$ 340,000	\$ 95,200	\$ 435,200	\$ 448,691	\$ 462,600	\$ 476,941	\$ 491,725	\$ 2,315,157	
TBN	Program Manager	1800	\$ 77,328	\$ 43	7,200	\$ 309,312	\$ 86,607	\$ 395,919	\$ 408,192	\$ 420,844	\$ 433,889	\$ 447,340	\$ 2,106,184	
TBN	Researcher	1800	\$ 122,592	\$ 68	7,200	\$ 490,368	\$ 137,303	\$ 627,671	\$ 647,127	\$ 667,187	\$ 687,872	\$ 709,197	\$ 3,339,054	
TBN	Associate Researcher	1800	\$ 90,108	\$ 50	14,400	\$ 720,864	\$ 201,842	\$ 922,706	\$ 951,306	\$ 980,797	\$ 1,011,200	\$ 1,042,545	\$ 4,908,554	
TBN	Assist Researcher	1800	\$ 72,968	\$ 41	14,400	\$ 583,744	\$ 163,448	\$ 747,192	\$ 770,355	\$ 794,235	\$ 818,852	\$ 844,237	\$ 3,974,871	
TBN	Junior Researcher	1800	\$ 61,260	\$ 34	7,200	\$ 245,040	\$ 68,611	\$ 313,651	\$ 404,218	\$ 416,749	\$ 429,670	\$ 442,989	\$ 2,007,277	
TBN	Graduate Assist - PhD 9	1800	\$ 21,288	\$ 12	10,800	\$ 127,728	\$ 12,134	\$ 139,862	\$ 144,198	\$ 148,666	\$ 153,272	\$ 158,022	\$ 744,020	
TBN	Graduate Assist - Masters 7	1800	\$ 19,680	\$ 11	10,800	\$ 118,080	\$ 11,218	\$ 129,298	\$ 133,305	\$ 137,438	\$ 141,695	\$ 146,091	\$ 687,827	
TBN	Undergraduate Student A4	1800	\$ 16,920	\$ 9	5,400	\$ 50,760	\$ 513	\$ 51,273	\$ 70,485	\$ 72,671	\$ 74,925	\$ 77,248	\$ 346,602	
TBN	Scientific Instrument Tech III	1800	\$ 64,932	\$ 36	2,160	\$ 77,918	\$ 21,817	\$ 99,735	\$ 119,965	\$ 123,684	\$ 127,519	\$ 131,471	\$ 602,374	
TBN	Administrative Assistant	1800	\$ 54,528	\$ 30	2,160	\$ 65,434	\$ 18,322	\$ 83,756	\$ 100,742	\$ 103,866	\$ 107,086	\$ 110,405	\$ 505,855	
Total Salaries									\$ 3,946,263	\$ 4,198,584	\$ 4,328,737	\$ 4,462,921	\$ 4,601,270	\$ 21,537,775
Post Doctoral Fellowship									\$	\$	\$	\$	\$	\$
Subcontracts									\$ 148,124	\$ 152,716	\$ 157,450	\$ 162,331	\$ 167,363	\$ 787,984
Services/Consultant									\$ 278,684	\$ 287,323	\$ 296,230	\$ 305,413	\$ 314,881	\$ 1,482,531
Materials & Supplies									\$ 735,106	\$ 825,867	\$ 840,036	\$ 865,807	\$ 881,028	\$ 4,147,844
Travel														
Domestic									\$ 179,892	\$ 185,468	\$ 191,218	\$ 197,145	\$ 203,257	\$ 956,980
International									\$ 20,084	\$ 20,708	\$ 21,350	\$ 22,012	\$ 22,694	\$ 106,848
Total Travel									\$ 199,976	\$ 206,176	\$ 212,568	\$ 219,157	\$ 225,951	\$ 1,063,828
Printing & Publication									\$	\$	\$	\$	\$	\$
Utilities & Communication									\$	\$	\$	\$	\$	\$
Participant Costs									\$	\$	\$	\$	\$	\$
Equipment									\$ 198,204	\$ 204,348	\$ 210,683	\$ 217,214	\$ 223,948	\$ 1,054,397
Other Costs									\$	\$	\$	\$	\$	\$
PDC Rate 45.1%									\$ 2,372,273	\$ 2,488,595	\$ 2,560,585	\$ 2,639,837	\$ 2,716,432	\$ 12,777,722
Total Direct Costs									\$ 7,878,630	\$ 8,363,609	\$ 8,606,289	\$ 8,872,680	\$ 9,130,873	\$ 42,852,081
Indirect Cost Rate 9.06% on MTDC, Base = \$								0.0906	\$ 691,487	\$ 725,393	\$ 746,377	\$ 769,478	\$ 791,804	\$ 3,724,539
Total Direct, PDC and Indirect Costs									\$ 8,570,117	\$ 9,089,002	\$ 9,352,666	\$ 9,642,158	\$ 9,922,677	\$ 46,576,620
Total Fixed Fee Cost									\$ 629,904	\$ 668,042	\$ 687,420	\$ 708,698	\$ 729,316	\$ 3,423,380
TOTAL EST COST PLUS FEE									\$ 9,200,021	\$ 9,757,044	\$ 10,040,086	\$ 10,350,856	\$ 10,651,993	\$ 50,000,000

Case 2: Current accounting structure for contracts and grants. In the current accounting structure there is only one “revenue” center: a) the Research and Training Revolving Fund (RTRF) or Indirect Cost. The current rates are:

- RTRF Rate: 36.3% of MTDC
- PDC Rate: 0% of MTDC
- Fixed Fee: 0% of total direct and indirect costs.

For comparison purposes it is assumed that all three direct cost categories in both cases remain the same. In other words, it is anticipated that over the 5 year period this indefinite delivery, indefinite quantities contract the proposed series of separate task orders to perform work will remain exactly the same. The cost proposal estimates how expenditures for these task orders will be allocated to particular cost categories. The quantities of supplies and services represented are estimates for the schedule only and as such do not represent purchases. As in Case 1, purchases will occur at the individual task order level and each task order will be submitted with its own cost proposal and estimated budget.

As previously, beginning in FY2006, all direct costs are increased by an inflation factor of 3.1%, which is based on the Honolulu Consumer Price Index for the second half of 2003 and the first half of 2004.

Table 3 shows a summary of the budget. It is assumed that the load of work will be distributed uniformly amongst the four core competencies. Table 4 shows the detailed assumptions on all cost centers.

NAVSEA COST PROPOSAL WITH CURRENT ACCOUNTING STRUCTURE (TABLE 3)
UARC - UNIVERSITY OF Hawai'i AT Mānoa
OCTOBER 1, 2005 - SEPTEMBER 30, 2010

	Year 1	Year 2	Year 3	Year 4	Year 5	Totals
ESTIMATED SALARIES						
Professionals, Faculty	3,442,339	3,629,889	3,742,412	3,858,424	3,978,033	18,651,097
Graduate and Undergraduate Students	320,433	347,988	358,775	369,892	381,361	1,778,449
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Sub total	3,946,263	4,198,584	4,328,737	4,462,921	4,601,270	21,537,775
ESTIMATED OTHER COSTS						
Services	278,684	287,323	296,230	305,413	314,881	1,482,531
Supplies	735,106	825,867	840,036	865,807	881,028	4,147,844
Travel	199,976	206,176	212,568	219,157	225,951	1,063,828
*Subcontracts	148,124	152,716	157,450	162,331	167,363	787,984
*Equipment	198,204	204,348	210,683	217,214	223,948	1,054,397
Prorated Direct Cost (0%)	0	0	0	0	0	0
UHM Indirect Cost (36.3%)	1,909,391	2,003,016	2,060,958	2,124,747	2,186,396	10,284,508
ESTIMATED TOTAL COST	7,415,748	7,878,030	8,106,662	8,357,590	8,600,837	40,358,867
Fixed Fee (0%)	0	0	0	0	0	0
TOTAL EST COST PLUS FEE	7,415,748	7,878,030	8,106,662	8,357,590	8,600,837	40,358,867

(TABLE 4)								Project Period		Project Period	Project Period	Project Period	Project Period	Total
BREAK OUT COST		Year 1						10/1/2005	9/30/2006	9/30/2007	9/30/2008	9/30/2009	9/30/2010	FY 06-10
Core Personnel	Role on Project	Calendar Person Hours	Calendar Person Salary	Hourly Rate	Person Hours Charged	Salary	Fringe	Requested Funding	Requested Funding	Requested Funding	Requested Funding	Requested Funding	Requested Funding	
TBN	Director	1800	\$ 170,000	\$ 94	3,600	\$ 340,000	\$ 95,200	\$ 435,200	\$ 448,691	\$ 462,600	\$ 476,941	\$ 491,725	\$ 2,315,157	
TBN	Program Manager	1800	\$ 77,328	\$ 43	7,200	\$ 309,312	\$ 86,607	\$ 395,919	\$ 408,192	\$ 420,844	\$ 433,889	\$ 447,340	\$ 2,106,184	
TBN	Researcher	1800	\$ 122,592	\$ 68	7,200	\$ 490,368	\$ 137,303	\$ 627,671	\$ 647,127	\$ 667,187	\$ 687,872	\$ 709,197	\$ 3,339,054	
TBN	Associate Researcher	1800	\$ 90,108	\$ 50	14,400	\$ 720,864	\$ 201,842	\$ 922,706	\$ 951,306	\$ 980,797	\$ 1,011,200	\$ 1,042,545	\$ 4,908,554	
TBN	Assist Researcher	1800	\$ 72,968	\$ 41	14,400	\$ 583,744	\$ 163,448	\$ 747,192	\$ 770,355	\$ 794,235	\$ 818,852	\$ 844,237	\$ 3,974,871	
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TBN	Graduate Assist - PhD 9	1800	\$ 21,288	\$ 12	10,800	\$ 127,728	\$ 12,134	\$ 139,862	\$ 144,198	\$ 148,666	\$ 153,272	\$ 158,022	\$ 744,020	
TBN	Graduate Assist - Masters 7	1800	\$ 19,680	\$ 11	10,800	\$ 118,080	\$ 11,218	\$ 129,298	\$ 133,305	\$ 137,438	\$ 141,695	\$ 146,091	\$ 687,827	
TBN	Undergraduate Student A4	1800	\$ 16,920	\$ 9	5,400	\$ 50,760	\$ 513	\$ 51,273	\$ 70,485	\$ 72,671	\$ 74,925	\$ 77,248	\$ 346,602	
TBN	Scientific Instrument Tech III	1800	\$ 64,932	\$ 36	2,160	\$ 77,918	\$ 21,817	\$ 99,735	\$ 119,965	\$ 123,684	\$ 127,519	\$ 131,471	\$ 602,374	
TBN	Administrative Assistant	1800	\$ 54,528	\$ 30	2,160	\$ 65,434	\$ 18,322	\$ 83,756	\$ 100,742	\$ 103,866	\$ 107,086	\$ 110,405	\$ 505,855	
Total Salaries									\$ 3,946,263	\$ 4,198,584	\$ 4,328,737	\$ 4,462,921	\$ 4,601,270	\$ 21,537,775
Post Doctoral Fellowship									\$	\$	\$	\$	\$	\$
Subcontracts									\$ 148,124	\$ 152,716	\$ 157,450	\$ 162,331	\$ 167,363	\$ 787,984
Services/Consultant									\$ 278,684	\$ 287,323	\$ 296,230	\$ 305,413	\$ 314,881	\$ 1,482,531
Materials & Supplies									\$ 735,106	\$ 825,867	\$ 840,036	\$ 865,807	\$ 881,028	\$ 4,147,844
Travel														
	Domestic							\$ 179,892	\$ 185,468	\$ 191,218	\$ 197,145	\$ 203,257	\$ 956,980	
	International							\$ 20,084	\$ 20,708	\$ 21,350	\$ 22,012	\$ 22,694	\$ 106,848	
Total Travel									\$ 199,976	\$ 206,176	\$ 212,568	\$ 219,157	\$ 225,951	\$ 1,063,828
Printing & Publication									\$	\$	\$	\$	\$	\$
Utilities & Communication									\$	\$	\$	\$	\$	\$
Participant Costs									\$	\$	\$	\$	\$	\$
Equipment									\$ 198,204	\$ 204,348	\$ 210,683	\$ 217,214	\$ 223,948	\$ 1,054,397
Other Costs									\$	\$	\$	\$	\$	\$
PDC Rate 0%									\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Direct Costs									\$ 5,506,357	\$ 5,875,014	\$ 6,045,704	\$ 6,232,843	\$ 6,414,441	\$ 30,074,359
Indirect Cost Rate 36.3% on MTDC, Base = \$								0.363	\$ 1,909,391	\$ 2,003,016	\$ 2,060,958	\$ 2,124,747	\$ 2,186,396	\$ 10,284,508
Total Direct and Indirect Costs									\$ 7,415,748	\$ 7,878,030	\$ 8,106,662	\$ 8,357,590	\$ 8,600,837	\$ 40,358,867
Total Fixed Fee Cost 0%									\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
TOTAL EST COST PLUS FEE									\$ 7,415,748	\$ 7,878,030	\$ 8,106,662	\$ 8,357,590	\$ 8,600,837	\$ 40,358,867

B.4 Summary of Financial Considerations

The first point that needs to be highlighted in this comparison is the fundamental difference that under the UARC all personnel are supported by extramural funds. This includes the Executive Director, Directors, administrative staff, researchers and support staff. As a result the sponsor pays for all the expenses of the UARC. In other words this operation will be completely supported by soft money. To achieve self-support the prorated direct cost component has been introduced in this type of contract. This rate includes expenses such as salaries and employee benefits for central services employees, computing services, communications, and some facility related costs. In our existing research enterprise the State of Hawaii subsidizes a large portion of our research operations in several different ways.

Secondly the RTRF rates for this contract are mainly different because of the issue of space. The space use and cost recovery in this contract is directly charged to the contract through the prorated cost rather than the RTRF. Space requirements and improvements are captured through the prorated cost. One can also see this delineation as a departure from the existing model where space expenses are heavily subsidized by the State and moving to a model that space is used as needed and according to the research capacity and capability. This model is extremely beneficial to the researchers because the return on space and general equipment expenses is used to improve the facilities and infrastructure of the laboratories that perform the work. Currently the RTRF is divided 25% at the Vice President of Research, 25% at the Mānoa Vice Chancellor for Research and 50% at the generating units. This model has been agreed upon by the faculty and the administration; but it does not guarantee that the funds go towards improving the research infrastructure of the laboratories and researchers that perform the research. As a result, our current indirect rate cost on campus is at 36.3% while at our peer an institution is typically greater than 50%. Hence, implicitly this contract vehicle allows charging what our research truly costs not what our research costs with state subsidies.

The third main difference is that this contract introduces a Fee as a new feature to our financial structure. The fee will be mainly used for conducting independent research and development work for Navy/Government, ensuring UARC staff employment stability, providing general purpose equipment, providing advanced education and training for students, researchers and staff. This is a new concept in our research enterprise for the University. Currently the University does not charge fee in any of its contracts. This is a new accounting practice unique to this contract vehicle.

Table 1 shows how much the University would charge under the UARC contract for a given amount of work under a regular contract. Table 3 shows how much the University would charge for the same amount of work. This comparison implies that the university “revenue” is approximately 25% higher using a contract vehicle like the one currently being negotiated. There are two main reasons for this. One is the fee component the other is the structure of the prorated direct cost and RTRF components.

C. Conclusion

The University of Hawai‘i at Mānoa, was recommended as the fifth UARC of the Navy in July of 2004. The impetus for the recommendation was the growth in the quality and quantity of research at the University of Hawai‘i at Manoa that was of interest to the Navy. In Fiscal Year 2004 the University of Hawai‘i received approximately \$54 million dollars in sponsored research from the Department of Defense

The Strategic Plan’s first tenant is that “Mānoa’s Essence is Research,” and specifically that we will “Support research initiatives where Mānoa is uniquely positioned to excel.” and that we will “Expand applied research and scholarship.” The UARC does both of these things. The 4 areas of core competence are specifically areas where we are uniquely positioned to excel: oceanography; astronomical research, optics and sensors; advanced electro optical systems, detectors, arrays and instrumentation; and applied engineering, advancements in communications, networks and protocols, and signal processing.

The proposed UARC would bring many advantages to our campus:

- Institutions that are designated UARCs have strengthened their graduate programs, particularly in areas such as oceanography, atmospheric science, and engineering.
- There is considerable revenue potential from this type of research that can be used to directly and indirectly benefit the undergraduate and graduate missions.
- The ease of the funding mechanism would allow faculty to accept projects they would normally have to expend significant time and resources trying to procure.
- The prestige of UARC status for our areas of core competency brings great honor to these already outstanding units and facilitates collaboration with other outstanding institutions.
- Additional core competencies could be established in the future, and might include UH's outstanding language training, cultural, and psychology programs.

The recent history of UH Mānoa is one of increased sensitivity to both Native Hawaiian issues and environmental concerns. This will not change if the proposed UARC is established. Moreover, it is important to remember that while this represents a different contract vehicle, those participating (faculty, staff and students) are still members of the UH community and as such are obligated to engage in responsible conduct of research and are governed by the same policies and regulations as all other researchers.