SUMMARY YEAR 1
PROPOSAL BUDGET FOR NSF USE ONLY

PROPOSAL BUDGET			FOF	R NSF USE ONLY			
ORGANIZATION			DPOSAL	NO.	N (months		
University of Hawaii				Propos			
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR		A۱	WARD N				
Philip Johnson							
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Fund Person-mor	led nths	Fu	unds ested By	Funds granted by NS	
(List each separately with title, A.7. show number in brackets)	CAL	ACAD	SUMR	pro	poser	(if different)	
1. Philip Johnson - Pl	0.00	0.00	2.00		26,222		
2. Matthias Fripp - co-Pl	0.00	0.00	1.00		10,556		
3. Daniele Spirandelli - co-Pl	0.00	0.00	1.00		8,222		
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		0		
7. (3) TOTAL SENIOR PERSONNEL (1 - 6)	0.00	0.00	4.00		45,000		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)					,		
1. (0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0		
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00			0		
3. (3) GRADUATE STUDENTS					61,416		
4. (0) UNDERGRADUATE STUDENTS					0		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER					0		
TOTAL SALARIES AND WAGES (A + B)				,	106,416		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					6,754		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)				,	113,170		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEED	ING \$5.0	00.)					
TOTAL EQUIPMENT E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN	ESSIONS)			0 9,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS	ESSIONS)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 0	ESSIONS)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 0. TRAVEL 0. TRAVEL	ESSIONS)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE	ESSIONS)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 0 0 0 0 0 0 0 0 0 0 0 0 0					9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR			S		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 0 0 0 0 0 0 0 0 0 0 0 0 0			S		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES			S		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION			S		9,000 0 0 15,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES			S		9,000 0 0 15,000 0 10,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES			S		9,000 0 0 15,000 0 10,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS			S		9,000 0 0 15,000 0 10,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER			S		9,000 0 15,000 0 10,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS			S		9,000 0 0 15,000 0 10,000 0 0 25,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G)			S		9,000 0 15,000 0 10,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)			S		9,000 0 0 15,000 0 10,000 0 0 25,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170)			S		9,000 0 15,000 0 10,000 0 0 25,000 147,170		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL INDIRECT COSTS (F&A)			S		9,000 0 15,000 0 10,000 0 25,000 147,170		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I)			S		9,000 0 15,000 0 10,000 0 25,000 147,170 61,076 208,246		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL INDIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS			S		9,000 0 15,000 0 10,000 0 25,000 147,170 61,076 208,246 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)	TICIPAN	T COSTS			9,000 0 15,000 0 10,000 0 25,000 147,170 61,076 208,246		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	TICIPAN	T COSTS	NT \$		9,000 0 15,000 0 10,000 0 25,000 147,170 61,076 208,246 0 208,246		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	TICIPAN	T COSTS	NT \$ FOR N	NSF US	9,000 0 15,000 0 10,000 0 0 25,000 147,170 61,076 208,246 0 208,246		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 147170) TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	TICIPAN	T COSTS	NT \$ FOR N	NSF US	9,000 0 15,000 0 10,000 0 0 25,000 147,170 61,076 208,246 0 208,246	CATION Initials - OR	

SUMMARY YEAR 2
PROPOSAL BUDGET FOR NSF USE ONLY

	PROPOSAL BUDGET		1		R NSF USE ONLY		
RGANIZATION		PRO	POSAL	NO.	DURATIO	ON (months	
University of Hawaii					Proposed	Granted	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR		AWARD NO		0.			
Philip Johnson							
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Funde Person-mon	ed oths	_ F	Funds	Funds	
(List each separately with title, A.7. show number in brackets)	CAL	ACAD	SUMR	Requ pr	uested By roposer	granted by N (if different)	
1. Philip Johnson - Pl	0.00		2.00		26,747		
2. Matthias Fripp - co-Pl	0.00		1.00		10,767		
3. Daniele Spirandelli - co-Pl	0.00		1.00		8,387		
4.	0.00	0.00	1.00		0,001		
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		0		
7. (3) TOTAL SENIOR PERSONNEL (1 - 6)	0.00		4.00		45,901		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)	0.00	0.00	7.00		70,301		
1. (1) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0		
2. (1) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00		0.00		0		
	0.00	0.00	0.00				
3. (3) GRADUATE STUDENTS					62,644		
4. (0) UNDERGRADUATE STUDENTS					0		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER					100 545		
TOTAL SALARIES AND WAGES (A + B)					108,545		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					6,888		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					115,433		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEED	νιι το φο,	,00.,					
TOTAL EQUIPMENT 5. TRAVEL 1. DOMESTIC (INCL. CANADA MEXICO AND LLS POSSI	PIANI22				0 000		
TOTAL EQUIPMENT E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN	ESSIONS	5)			9,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI	ESSIONS	i)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS	ESSIONS	;)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$	ESSIONS	;)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 0 0	ESSIONS	s)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN 0 0 0 0	ESSIONS	3)			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ESSIONS	()			9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS			3		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS G. OTHER DIRECT COSTS			3		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$			3		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR			3		9,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (4) TOTAL PARTICIPANTS (5) TOTAL PARTICIPANTS (6) TOTAL PARTICIPANTS (7) TOTAL PAR			3		9,000 0 0 10,000 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (4) TOTAL PARTICIPANTS (5) TOTAL PARTICIPANTS (6) TOTAL PARTICIPANTS (7) TOTAL			3		9,000 0 10,000 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANTS (1) TOTAL PARTICIPANTS (2) TOTAL PARTICIPANTS (3) TOTAL PARTICIPANTS (4) TOTAL PARTICIPANTS (5) TOTAL PARTICIPANTS (6) TOTAL PARTICIPANTS (7) TOTAL			3		9,000 0 10,000 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR G. OTHER DIRECT COSTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER			3		9,000 0 10,000 0 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL P					9,000 0 10,000 0 0 0 10,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PA					9,000 0 10,000 0 0 0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PA					9,000 0 10,000 0 0 0 10,000		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTI					9,000 0 10,000 0 0 0 10,000 134,433		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTI					9,000 0 10,000 0 0 0 10,000 134,433		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTI					9,000 0 10,000 0 0 0 10,000 134,433		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PART			3		9,000 0 10,000 0 0 0 10,000 134,433		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR					9,000 0 10,000 0 0 0 10,000 134,433 55,790 190,223		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PAR	RTICIPAN	T COSTS			9,000 0 10,000 0 0 0 10,000 134,433 55,790 190,223		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS \$ 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIP	RTICIPAN	T COSTS	NT \$	ISF US	9,000 0 10,000 0 0 0 10,000 134,433 55,790 190,223		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSI 2. FOREIGN F. PARTICIPANT SUPPORT COSTS 1. STIPENDS 2. TRAVEL 3. SUBSISTENCE 4. OTHER TOTAL NUMBER OF PARTICIPANTS 1. MATERIALS AND SUPPLIES 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION 3. CONSULTANT SERVICES 4. COMPUTER SERVICES 5. SUBAWARDS 6. OTHER TOTAL OTHER DIRECT COSTS H. TOTAL DIRECT COSTS (A THROUGH G) 1. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 41.5000, Base: 134433) TOTAL INDIRECT COSTS (F&A) J. TOTAL DIRECT AND INDIRECT COSTS (H + I) K. RESIDUAL FUNDS L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K) M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	RTICIPAN	DIFFEREN	√T\$ FOR N		9,000 0 10,000 0 0 0 10,000 134,433 55,790 190,223 0	CATION	

SUMMARY Cumulative
PROPOSAL BUDGET FOR NSF USE ONLY
PROPOSAL NO. DURATION (

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ORGANIZATION		PRO	DPOSAL I				
University of Hawaii					Proposed	Granted	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR		A۱	WARD NO	Э.			
Philip Johnson		105.5					
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Fund Person-mo	ed nths		Funds uested By	Funds granted by NSF	
(List each separately with title, A.7. show number in brackets)	CAL	ACAD	SUMR		roposer	(if different)	
1. Philip Johnson - Pl	0.00	0.00	4.00		52,969		
2. Matthias Fripp - co-Pl	0.00	0.00	2.00		21,323		
3. Daniele Spirandelli - co-Pl	0.00	0.00	2.00		16,609		
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		0		
7. (3) TOTAL SENIOR PERSONNEL (1 - 6)	0.00	0.00	8.00		90,901		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0		
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00		0		
3. (6) GRADUATE STUDENTS					124,060		
4. (0) UNDERGRADUATE STUDENTS					0		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER					0		
TOTAL SALARIES AND WAGES (A + B)					214,961		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					13,642		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					228,603		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEED	ING \$5.0	000.)			,		
TOTAL EQUIPMENT					0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSE	SSIONS	S)			18,000		
2. FOREIGN		,			0		
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$							
2. TRAVEL							
3. SUBSISTENCE							
4. OTHER0							
G. OTHER DIRECT COSTS					0		
1. MATERIALS AND SUPPLIES					25,000		
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0		
3. CONSULTANT SERVICES					10,000		
4. COMPUTER SERVICES					0		
5. SUBAWARDS					0		
6. OTHER					0		
TOTAL OTHER DIRECT COSTS					35,000		
H. TOTAL DIRECT COSTS (A THROUGH G)					281,603		
,					201,003		
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIDECT COSTS (E. A.)			-		116 060		
TOTAL DIRECT COSTS (F&A)					116,866		
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					398,469		
K. RESIDUAL FUNDS					0 400		
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)		====:			398,469		
M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LE	VEL IF [DIFFERE					
PI/PD NAME	\vdash				SE ONLY		
Philip Johnson					TE VERIFIC		
ORG. REP. NAME*	Da	ate Checked	Date	Of Rate	e Sheet	Initials - ORG	
C *ELECTRON	HOLON	ATLIDEC	DEALIDE		- PE\//CEE	DUDALT	