The PRECiS Environment
Pacifica Limited Power Projection---Force Movements

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Transportation planning/scheduling problems address issues involved in satisfying the constraints associated with moving entities such as aircraft, ships, and personnel to seaports, airports, etc. This scenario was developed to emulate the movement requirements used during the Planning Initiative IFD-2. The movements described in Table A1 calculate force movements which meet a particular set of requirements using a set of allocated resources.

Currently, this scenario is set up as a "scheduling problem" with the input provided being the high-level movement requirements, schedule, and list of resources and resource capabilities.

In the future, a section will be added to this appendix that describes the initial situation and goals that would allow a planning system to construct an alternative high-level Course of Action (COA).

1 Example Movement Requirements

Table 1.1, next page, contains a set of "movements" to describe one COA to solve the Pacifica scenario. This table shows the requirements of a set of force movements to accomplish a "limited power projection" show-of-force mission relating to the island of Pacifica. For each bold outlined section in the table, the first line describes the overall requirements of an individual unit, for instance, the 87th-F16 squadron originates from McCord Air Force Base (PSBD), will be ready to load on crisis date 0, is destined for the airport in Calypso, Pacifica, and must arrive there no later than C+34. The remaining lines in that section describe the component moves necessary to achieve this unit move requirement. The sea transport components will leave from Tacoma, Washington, travel to the seaport at City-K, Country-X and then on to Calypso. The air transport components will leave from McCord AFB, travel to the airport at City-K, Country-X and then on to Calypso airport.

Figure 1.1 describes these movements graphically.

Unit ID	Unit Type	Origin	RLD	Destination	RDD	Mode	POE	POD	LAD
BB62-SAG	SAG	UTBS	0	NCLS	21				
BB62-SAG		UTBS		NCLS	21	SEA	UTAC	NCLS	21
CV66-ACS	ACS	SYZP	0	NCLS	15				
CV66-ACS		SYZP		NCLS	15	SEA	SYZZ	NCLS	15
87th-F16	891	PSBD	0	CPSA	34				
87th-F16		PSBD		UCKA	30	AIR	PSBD	UCKA	29
87th-F16		PSBD		UCKS	33	SEA	WPVT	UCKS	32
87th-F16		UCKS		CPSA	34	SEA	UCKS	CLPS	33
87th-F16		UCKA		CPSA	34	AIR	UCKA	CPSA	34
86th-F16	891	PSBD	0	CPSA	25				
86th-F16		PSBD		UCKA	21	AIR	PSBD	UCKA	20
86th-F16		PSBD		UCKS	25	SEA	WPVT	UCKS	24
86th-F16		UCKS		CPSA	25	SEA	UCKS	CLPS	24
86th-F16		UCKA		CPSA	25	AIR	UCKA	CPSA	25
27th-F15	89B	PSBD	0	CPSA	34				
27th-F15		PSBD		UCKS	30	SEA	WPVT	UCKS	29
27th-F15		PSBD		UCKA	30	AIR	PSBD	UCKA	29
27th-F15		UCKS		CPSA	34	SEA	UCKS	CLPS	33
27th-F15		UCKA		CPSA	34	AIR	UCKA	CPSA	34
83rd-LIB	LIB	JKFQ	0	DLTA	34				
83rd-LIB		JKFQ		NCLA	29	AIR	PSBD	NCLA	29
83rd-LIB		JKFQ		NCLS	33	SEA	WPVT	NCLS	32
83rd-LIB		JKFQ		DLTS	34	SEA	WPVT	DLTS	33
83rd-LIB		NCLS		DLTS	34	SEA	NCLS	DLTS	33
83rd-LIB		NCLA		DLTA	34	AIR	NCLA	DLTA	33
57th-IMF	IMF	JKFQ	0	DLTA	34				
57th-IMF		JKFQ		NCLA	29	AIR	PSBD	NCLA	29
57th-IMF		JKFQ		DLTA	33	SEA	WPVT	DLTS	32
57th-IMF		JKFQ		NCLS	34	SEA	WPVT	NCLS	33
57th-IMF		NCLS		DLTA	34	SEA	NCLS	DLTS	33
57th-IMF		NCLA		DLTA	34	AIR	NCLA	DLTA	33
199th-IMB	IMB	JKFQ	14	DLTA	34				
199th-IMB		JKFQ		DLTA	34	SEA	WPVT	DLTS	33
199th-IMB		JKFQ		NCLS	32	SEA	WPVT	NCLS	31
199th-IMB		JKFQ		NCLA	29	AIR	PSBD	NCLA	29
199th-IMB		NCLS		DLTA	34	SEA	NCLS	DLTS	32
199th-IMB		NCLA		DLTA	34	AIR	NCLA	DLTA	33
1st-MEB-A	701	ETZB	10	NCLS	21				
1st-MEB-A		ETZB		NCLS	21	SEA	UTAC	NCLS	21
3rd-ACR	ACR	UTLR	10	DLTA	26				
3rd-ACR		UTLR		DLTS	26	SEA	UTLS	DLTS	25
3rd-ACR		UTLR		DLTS	26	SEA	UTLS	DLTS	25
3rd-ACR		UTLR		9CNA	21	AIR	UTKY	9CNA	21
3rd-ACR		UTLR		DLTS	26	SEA	UTLS	DLTS	24
3rd-ACR		9CNA		DLTA	26	AIR	9CNA	DLTA	25

Table 1.1: Movement Records

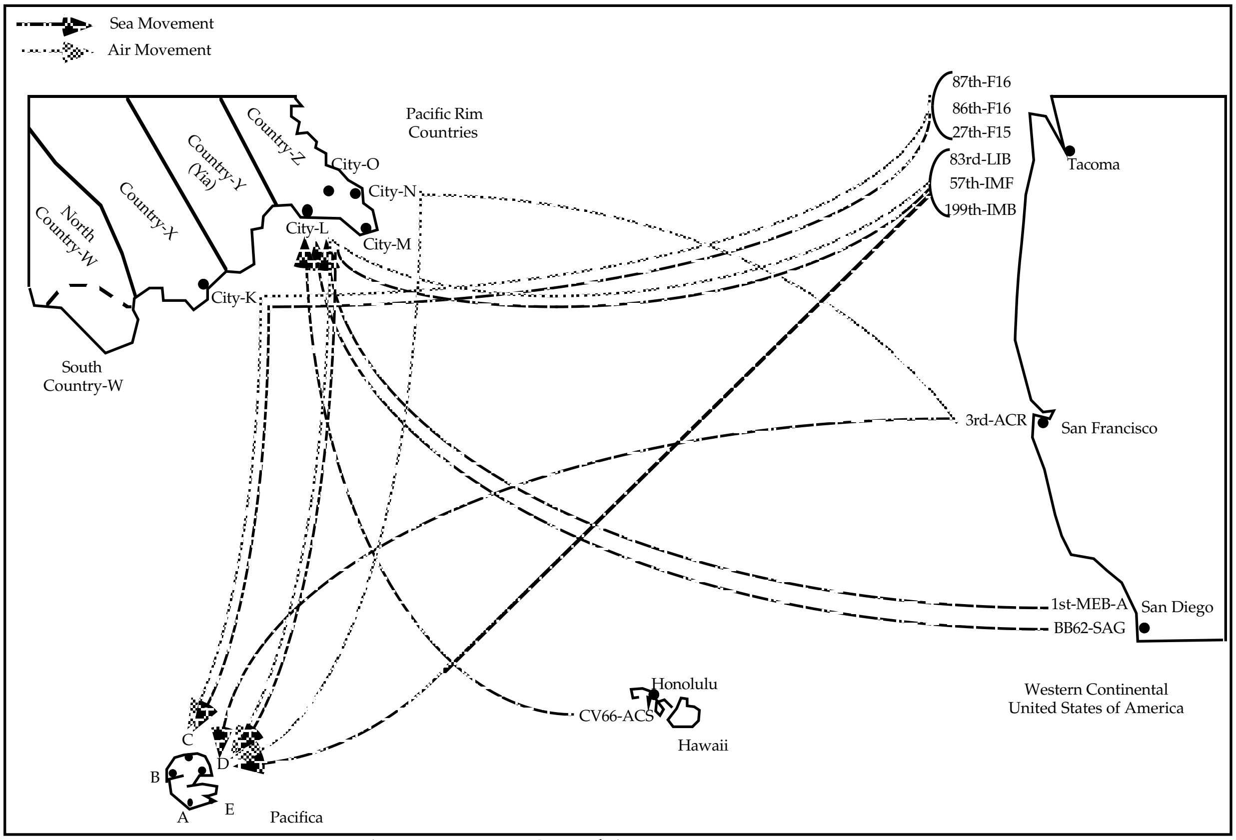

Figure 1.1: Graphic Force Movement

2 Allocated Resources

The following are the resource allocations for the Pacifica Limited Power Projection Scenario.

2.1 Airlift

All aircraft are available as of day 0 at US locations. Most aircraft will be available at PSBD (McCord AFB, WA). However, 5 C-5 aircraft and 10 C-141 aircraft will be available at UTKY (San Francisco, CA). All airlift aircraft are allocated throughout the entire operation.

For political reasons, we are not allowed to land either C-5 or C-141 aircraft in Pacifica. Only C-130 airlifts will be allowed. The B747 aircraft are not allowed due to emminent danger to the aircraft.

Aircraft Type	No. Available
C-5	56
C-141	185
C-130	128

Table 2.1: Aircraft Availability

2.2 Sealift

C+X indicates the day that the ships become available. Once a ship is available, it continues to be available throughout the entire operation. Assume (i) all Breakbulk become available at WPVT (Tacoma, WA), (ii) all Container ships become available at UTAC (San Diego, CA), (iii) all LASH become available at UTAC (San Diego, CA), (iv) all the RORO become available at WPVT (Tacoma, WA.), and (v) all the Sea Barge become available at UTLS (San Francisco, CA).

Sealift:	C+0	C+2	C+4	C+5	C+10
Breakbulk	8	3	0	7	2
Container	0	2	0	1	0
LASH	0	3	3	0	0
RORO	1	2	3	0	0
Sea Barge	0	1	1	0	0

Table 2.2: Ship Availability