

A SYSTEMS ANALYSIS PROCEDURE FOR
ESTIMATING THE CAPACITY OF AN AIRPORT;
A SELECTED BIBLIOGRAPHY

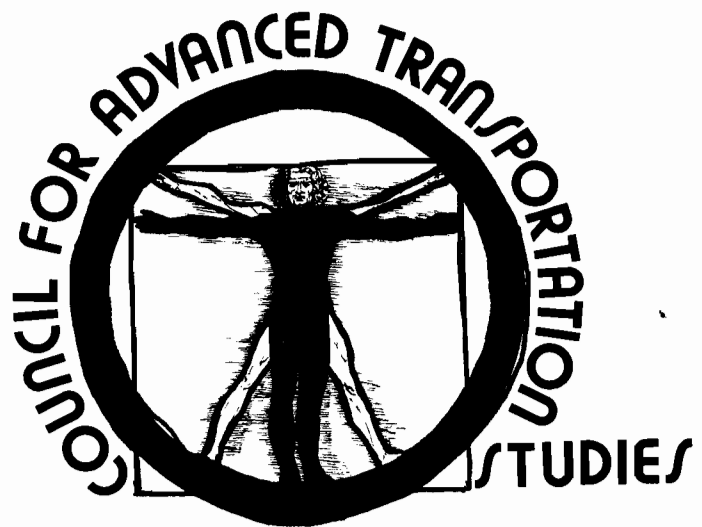
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Introduction

This bibliography was prepared as part of a research project entitled as above conducted by The University of Texas at Austin and sponsored by the U. S. Department of Transportation, Office of University Research under Contract DOT-OS-50232. The objective of this research project is to develop a systems analysis procedure for estimating airport capacity in which the capacities of the individual components of an airport are evaluated and compared.

Only that part of the airport system between the airport boundary on the landside and the terminal air traffic control boundary on the airside is considered. In addition, the list is limited to references which discuss processing facilities for aircraft, air passengers, visitors, baggage and automobiles. Air cargo is treated only to the extent that it affects the operation of passenger aircraft. Emphasis has been placed on the landside components of an airport, although most of the major airside references are included. The above limitations on the scope of the bibliography derive from the above objective of this research project.

Care has been taken in the preparation of this bibliography to include all references pertinent to our research objective. Many of these references have been obtained and reviewed by the project staff. Others (indicated by an asterisk) are presently being sought. During the course of research those references on the list considered to be significant will be annotated and a final version of the bibliography will be prepared. The final version will include a detailed index by subject and airport component, and will be annotated. In that form, the bibliography will be of great interest to airport planners and other researchers in the field. Therefore, we will attempt to publish the final bibliography through the Transportation Systems Center, so that it receives as wide a distribution as possible.

Organization of Bibliography

The references contained in this bibliography are listed and numbered in alphabetical order by author. A subject index is provided which indicate the numbers of references which cover particular functional and physical components of the airport as well as various analysis techniques that have been applied to estimating airport capacity and level of service. In the final version of the bibliography, each reference will be coded according to the particular components and analysis techniques that it includes. These indices along with the annotations will enhance the utility of the final version of the bibliography.

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SUBJECT INDEX

A subject index for the references in this bibliography is summarized in Table 1. The four basic subjects by which references have been classified are (1) access, (2) passenger processing, (3) baggage and (4) the airside. These basic categories are further broken down into individual components as shown in the table.

In addition to the above four basic categories, we have found it useful to include four other major subject classifications. The first, *general discussion*, includes references which treat various combinations of the above basic subjects in a very general way. The second additional classification, *passenger/air interface* includes references which discuss various aspects of the interface between the landside and the airside of an airport. *Miscellaneous* includes subjects that affect the capacity of the airport, but which do not include the actual physical or operational components on the airport system. The fourth added category, *techniques and concepts*, includes references which discuss particular concepts and analysis techniques as applied to estimating the capacity of an airport or airport components.

It is important to note that a particular reference number may appear under more than one subject classification heading. For example, a reference may attempt to cover all airport components, in which case its number would appear under each of the major subject headings.

This subject index will help guide our literature search as we take up individual topics in the subsequent stages of this research. It will also be helpful to others working in the area of airport capacity analysis.

TABLE 1. SUBJECT INDEX

GENERAL DISCUSSION																			
AIRPORT					LANDSIDE		ACCESS		PASSENGER TERMINAL										AIRSIDE
3	25	28	59	67	73	78	22	60	21	49	64	6	7	19	23	24	31	42	5 38
86	87	94	112	131	132	133	70	79	68	80	139	43	49	57	66	68	71	75	77 82
149	181	182	183	189	190	219	142	158	152	173	204	105	106	120	123	164	177	179	92 100
232	256	264	296	298	341	342	224	262	233	262	272	180	186	203	211	214	235	244	156 158
355	356	357	371	372	375	376			294	304	364	279	290	301	302	312	318	319	208 276
379	382											320	328	344	346	365	380		293

ACCESS															
OFF-AIRPORT				ON-AIRPORT				PARKING				CURBSIDE			
26	40	41	42	43	48	50	2	20	26	27	41	42	41	42	43
63	88	89	107	111	148	160	43	45	54	62	81	96	130	136	159
167	191	206	213	218	226	227	114	128	167	218	267	274	243	246	255
240	257	305	331	367	386		275	305	331	333	343	345	321	367	373
							367	373	374	378	384	386	385	386	386

PASSENGER PROCESSING											
TICKETING	SECURITY & CUSTOMS CLEARANCE		CIRCULATION				SERVICES & AMENITIES		BOARDING AND DEBOARDING		
130	167	41	42	4	9	61	115	116	117	118	167
192	202	43	167	138	143	144	145	146	151	153	169
277	278	200	211	157	167	168	192	201	205	217	386
281	309	287	381	228	234	239	251	258	260	274	
373		386		281	299	326	386				

BAGGAGE											
CHECK-IN				HANDLING				CLAIM			
41	42	43	46	52	4	32	34	46	52	36	41
121	155	167	170	175	155	167	170	175	176	52	65
188	201	209	211	223	188	201	209	211	223	175	188
259	283	284	309	329	259	283	284	322	323	211	223
					329					245	259

PASSENGER/AIR INTERFACE															
7	41	42	43	49	61	72	90	101	108	137	158	167	171	178	192
194	216	258	260	271	276	281	303	317	330	366	368	373	377	386	

AIRSIDE															
APRON/GATE				TAXIWAY		RUNWAY								AIRSPACE	
41	42	43	44	15	58	10	11	12	13	14	15	16	17	29	1 16 30 53
49	55	56	58	134	162	33	35	51	53	58	74	84	85	93	97 99 167 172
83	104	134	165	165	167	109	110	122	126	129	134	135	141	154	185 231 237 238
167	178	192	215	192	215	161	165	166	167	172	184	192	193	207	248 250 253 277
258	260	265	276	265	339	215	222	229	230	237	238	249	252	253	278 280 308 332
281	286	288	289	348	349	234	265	266	269	273	277	278	308	335	358 359 362 363
292	297	311	311	361		336	337	340	347	348	349	351	352	353	386
314	338	348	349			354	360	361	369	370	386				

MISCELLANEOUS											
OFF-AIRPORT PROCESSING	GENERAL AVIATION	V/STOL	PATTERN OF DEMAND								ENVIRONMENTAL FACTORS
41	42	63	119	8	16	18	37	38	41	167	31 41
43	113	125	167	42	43	45	90	60	70	386	42 43
124	140	167	199	73	76	95	98	103	113		63 67
167	204	337	220	121	127	142	147	167	187		109 111
221	241	340	282	197	198	225	236	241	257		116 167
306	316			263	285	293	295	313	314		191 241
373				327	348	349	349	372	386		272 386

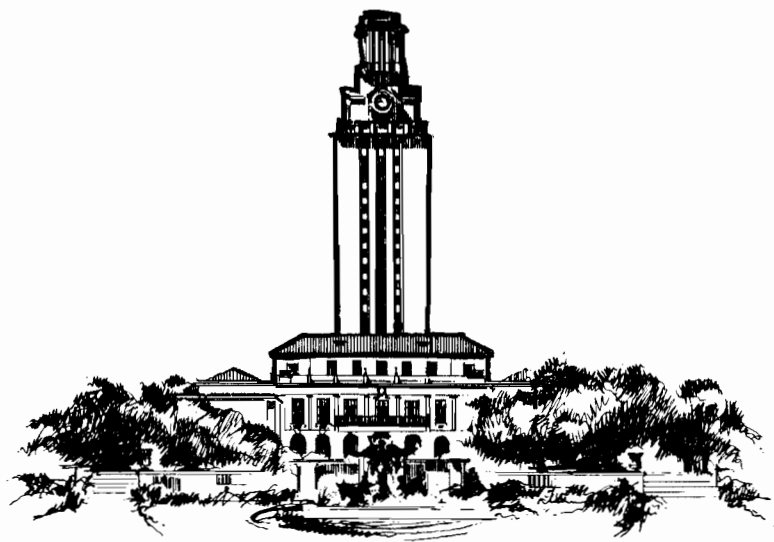
TECHNIQUES AND CONCEPTS						
LEVEL-OF-SERVICE	SYSTEMS APPROACH	MATHEMATICAL OPTIMIZATION	QUEUEING PROCESS	SIMULATION	ECONOMIC ANALYSIS	
24	29	41	42	8	20	36 51
41	42	43	63	65	122	55 56 58 59
43	60	90	91	154	167	62 71 105 115
95	115	106	167	196	202	126 128 129 143
116	117	200	296	207	231	167 185 210 212
118	142	373	374	245	269	223 224 236 238
164	167	382	386	277	278	270 281 284 291
192	234			291	313	300 323 345 385
247	268			314	322	
325	383			380		

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