

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1913

DECEMBER 06, 2011

PROJECT E-A701

**The following classification changes will be effected by this order:**

	<u>Class</u>	<u>Subclass</u>	<u>Art Unit</u>	<u>Ex'r Search Room</u>
<b>Abolished:</b>	701	29-35, 200-226	3661	OS
<b>Established:</b>	701	29.1-29.9, 30.1-30.9, 31.1-31.9, 32.1-32.9, 33.1-33.9, 34.1-34.4, 400, 408-478, 478.5, 479-541	3661	OS

**The following classes are also impacted by this order:  
73, 244, 340, 342, 343, 348, 368, 375, 380, 434, 712, 713**

**This order includes the following:**

- A. CLASSIFICATION MANUAL CHANGES
- B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED SUBCLASSES
- C. CHANGES TO THE USPC-TO-IPC CONCORDANCE
- D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS

CLASSIFICATION ORDER 1913

DECEMBER 06, 2011

PROJECT E-A701

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Editor(s):	Varona Stevens
Publications Specialist(s):	Louise Bogans, Yvonne Smith

1	<b>VEHICLE CONTROL, GUIDANCE, OPERATION, OR INDICATION</b>	43	...Fail-safe system
2	.Remote control system	44	...Artificial intelligence (e.g., fuzzy logic)
3	.Aeronautical vehicle	45	..Control of vehicle safety devices (e.g., airbag, seat- belt, etc.)
4	..Altitude or attitude control or indication	46	...By integrating the amplitude of the input signal
5	...Rate of change (e.g., ascent, descent)	47	...By frequency or waveform analysis
6	...Angle of attack	48	..Cooperative or multiple control (e.g., suspension and braking)
7	...Air speed or velocity measurement	49	..Vehicle equipment position control (e.g., seat, mirror, door, window, headrest, or headlamp)
8	...Threshold or reference value	50	.Construction or agricultural- type vehicle (e.g., crane, forklift)
9	...Warning signal or alarm	51	.Transmission control
10	...Compensation for environmental conditions	52	..Semiautomatic control (e.g., switchable between automatic and manual)
11	...Auto pilot	53	..And other vehicle control
12	...Inner/outer loop	54	...Engine output control
13	...Spacecraft or satellite	55	..By changing shift map, schedule, or pattern
14	..Flight condition indicating system	56	...Having a plurality of preset maps, schedules, or patterns
15	..With indication or control of take-off	57	..Fuzzy logic
16	..With indication or control of landing	58	..Adaptive control
17	...I.L.S. or radar guidance	59	...Model or learning means (e.g., neural network)
18	...Profile of descent	60	...Feedback control (e.g., closed loop)
19	.Railway vehicle	61	...Using a transmission ratio as feedback control
20	.Railway vehicle speed control	62	..Fail-safe control (e.g., preventing a gear shift)
21	.Marine vehicle	63	...Responsive to faulty sensor
22	.Electric vehicle	64	..Indicating a completion of a shift or a shift to be completed
23	.Automatic route guidance vehicle	65	..Responsive to road, external, or ambient condition
24	..On-board computer interact with a host computer	66	..Time regulated operations
25	..Storage or planning of route information	67	.Clutch control
26	...Modification or correction of route information	68	..Adaptive control
27	..Artificial intelligence (e.g., fuzzy logic)	69	.Control of power distribution between vehicle axis or wheels (e.g., four wheel drive vehicle)
28	..Having image processing		
36	.Vehicle subsystem or accessory control		
37	..Suspension control		
38	...Attitude change suppressive control (e.g., antiroll or antipitch)		
39	...Fail-safe system		
40	...Artificial intelligence (e.g., fuzzy logic)		
41	..Steering control		
42	..Feedback, transfer function or proportional and derivative (P&D) control		

70	.Indication or control of braking, acceleration, or deceleration	96	...Having inter-vehicle distance or speed control
71	..Antiskid, antilock, or brake slip control	97	...Fail-safe system
72	...During cornering or turning of vehicle	98	...Artificial intelligence (e.g., fuzzy logic)
73	...On split coefficient surface (u)	99	.With indicator or control of power plant (e.g., performance)
74	..Having particular means to determine a reference value for wheel slippage or pseudo- vehicle speed	100	..Gas turbine, compressor
75	...Correction or modification	101	..Internal-combustion engine
76	...Fail-safe system	102	...Digital or programmed data processor
77	...Artificial intelligence (e.g., fuzzy logic)	103	...Control of air/fuel ratio or fuel injection
78	...Control of brake pressure	104	....Controlling fuel quantity
79	...Having speed variation responsive means (e.g., acceleration, deceleration)	105	....Controlling timing
80	...Having coefficient of friction or road condition determining means	106	....Artificial intelligence (e.g., fuzzy logic)
81	...Four wheel drive, electric, or heavy vehicles	107	....Fail-safe system
82	..Antispin, traction control, or drive slip control	108	....Exhaust gas circulation (EGC)
83	...Control of brake pressure	109	....Detection of O2 concentration
84	...Control of engine torque	110	...Speed, acceleration, deceleration
85	...Having throttle valve positioning	111	...Vibration, roughness, knock
86	...Having fuel cutting or ignition timing retarding	112	...Engine stop, fuel shutoff
87	...Control of transmission torque	113	...Starting, warmup
88	..Restricting differential operation	114	...Backup, interrupt, reset, or test
89	...Four wheel drive vehicle	115	...Specific memory or interfacing device
90	..Having particular slip threshold, target slip ratio, or target engine torque determining means	116	.With indication or control to maintain fixed position
91	...Integrated with antiskid or other vehicle control system (e.g., cruise control, suspension)	117	.Traffic analysis or control of surface vehicle
92	...Fail-safe system	118	..With determination of traffic density
93	..Vehicle speed control (e.g., cruise control)	119	..With determination of traffic speed
94	...Having gradient responsive control to suppress hunting, overshooting, or undershooting	120	.Traffic analysis or control of aircraft
95	...By transmission shifting control	121	..With speed control or order
		122	..With course diversion
		123	.With indication of fuel consumption rate or economy of usage
		124	.Determining balance or center of gravity (e.g., load distribution of vehicle)
		29.1	.Vehicle diagnosis or maintenance determination

29.2	..Failure detection initiates subsequent vehicle control	32.3	..Including vehicle location determination
29.3	..For multiple vehicles (e.g., fleet, etc.)	32.4	...By satellite positioning system (e.g., GPS, etc.)
29.4	..Indication of maintenance interval	32.5	..Including vehicle distance travelled determination
29.5	...Caused by oil condition degradation	32.6	..Including data security (e.g., encryption, password, etc.)
29.6	..Vehicle or device identification	32.7	..Having internal vehicle network to distribute diagnosis or maintenance data therein
29.7	..Detection of faulty sensor	32.8	..Active testing (i.e., providing input to system)
29.8	..By applying signal to test sensor	32.9	..Using mathematical model
29.9	...Fault prediction	33.1	..Calibration
30.1	...Inhibiting fault indication	33.2	..Including portable or handheld element (e.g., linked to an On Board Diagnostic system, etc.)
30.2	...Using mathematical model	33.3	...Having removable data recording device
30.3	...Plausibility, verification or confirmation of sensor output	33.4	..Storing operational history (e.g., data logging, etc.)
30.4	...Utilizing time related property of sensor output (e.g., period or frequency, etc.)	33.5	..Pass, fail or inconclusive status
30.5	...By specific comparison with sensor output	33.6	..Utilizing time related property of fault signal (e.g., duration, etc.)
30.6	....Mutual comparison of plural identical sensors	33.7	..Including signal comparison
30.7	....Comparison of sensor with output of different type sensor	33.8	...To range of values
30.8	....Comparing current sensor output with previously stored value thereof	33.9	...To threshold
30.9	....Sensor output compared to range of values	34.1	....Variable or dynamic
31.1	....Sensor output compared to threshold	34.2	..Customized for particular vehicle type or model
31.2	....Variable or dynamic	34.3	..Having plural diagnostic processors
31.3	...Including event counter	34.4	..Diagnosis or maintenance of specific vehicle subsystem
31.4	..Diagnosis or maintenance need determined externally to vehicle	400	<b>NAVIGATION</b>
31.5	...Having particular communication link (e.g., Internet, satellite, etc.) with external site	408	..Employing position determining equipment
31.6	..Determining repair needed to correct fault	409	..For use in a map database system
31.7	..Validation or confirmation of fault	410	...Including route searching or determining
31.8	..Determining likely cause of fault	411	....Route correction, modification or verification
31.9	..Failure prediction	412	....Including satellite positioning system (e.g., GPS, etc.)
32.1	..Trend analysis	413	....Cancellation of newly corrected or modified route
32.2	..Data recording following vehicle collision	414	....Based on traffic condition (e.g., congestion, etc.)
		415	....Based on weather condition

416	.....Regenerating entirely new route from current position	449	....Correcting for terrestrial magnetic field
417	.....Having particular off-route detection	450	...Updating existing user map database
418	.....User interface	451	...Data sent to user from remote location
419	.....Audio	452	.....Data sent in increments
420	....Remote route searching or determining	453	.....Per user request
421	.....Route information sent to user in successive portions	454	...Having particular presentation of location along with data from map database
422	....For plural moving bodies	455	...Having variable map scale
423	....Based on real time condition (e.g., traffic, weather, etc.)	456	...Inhibiting presentation change
424	....Based on user driving history	457	...Conditionally changed presentation
425	....Based on user input preference	458	....Bird's eye view
426	.....Point of interest (POI) or landmark	459	....Field within field
427	.....Using speech recognition	460	...Vehicle having fixed position within the presentation along with navigational map moving relative thereto
428	....Having audio or visual route guidance	461	...Including map data storage or retrieval
429	.....Using color to differentiate route portion	462	...Selecting from plural storage devices to obtain map data
430	....Having particular storage or retrieval of data	463	...Using hard drive
431	...Having audio or visual route guidance	464	...Using cassette tape
432	....Plural mode display	465	..Determination of estimated time of arrival (ETA)
433	....Pedestrian guidance	466	..Determination of along-track or cross-track deviation
434	.....Within building	467	..Including way point navigation
435	....Prohibitive indication (e.g., do not enter, etc.)	468	..Using satellite positioning system (e.g., Global Positioning System (GPS), etc.)
436	....Visual guidance having enhanced realism (e.g., 3 dimensional, etc.)	469	...Having accuracy improvement of position or location
437	....Detailed route intersection guidance	470	...Having multiple antennas or receivers (e.g., differential GPS, etc.)
438	....Including point of interest (POI) or landmark	471	.....Including plural widely separated fixed GPS stations (e.g., Wide Area Augmentation System (WAAS), etc.)
439	....Providing supplemental information (e.g., environmental condition, etc.)	472	...Having a self-contained position computing mechanism (e.g., dead-reckoning, etc.)
440	....Guidance by text	473	...Correcting multiple diverse errors
441	....Audio guidance other than speech	474	...Anti-jamming
442	....Providing indication of off-route condition	475	...Dilution of precision compensating
443	....Using speech recognition or synthesis		
444	....Having particular mounting of guidance device to vehicle		
445	...Having location correction		
446	....By map matching		
447	.....Of multiple locations		
448	.....Using terrain recognition		

476	....Isolating data from error producing satellite	503	...Including Doppler effect in inertial sensing signal processing
477	....Integer ambiguity resolution		
478	....Correcting clock signal error	504	...Including gravitational effect in inertial sensing signal processing
478.5	....Multipath distortion reduction		
479	....Using filter	505	...Having error correction of inputs to or outputs from an inertial sensing device
480	.....Kalman		
481	....Using artificial intelligence (e.g., neural network, etc.)	506	....Plural diverse signals
482	...Plural object location determination (e.g., fleet, etc.)	507	....Velocity
		508	....Azimuth
		509	....By filtering
483	..Multi-mode (e.g., stand alone/network assisted, etc.)	510	.....Kalman
		511	...Including matrix processing
484	..Having communication link to external ground site	512	...Including vector processing
		513	..Using star tracker
485	....Location or position determined at external ground site	514	..Including radar or optical ground scanner
		515	..Emergency use
486	...Having security processing (e.g., password, encryption, etc.)	516	..Location dependent distribution of information to user
		517	..Transmission of location information to remote site
487	..User interface		
488	....Speech recognition or speech synthesized output	518	..Error correction
		519	..Object tracking
489	...Using vector processing	520	..Conversion of location coordinates
490	...Having power conservation		
491	...Portable	521	..Including history log
492	..Using VHF omnidirectional radio range/distance measuring equipment (VOR/DME) (e.g., Tacan, etc.)	522	..Using computer network (e.g., Internet, etc.)
		523	..Using imaging device
		524	..Using neural network
493	..Using hyperbolic lines of position (e.g., Loran, Decca, etc.)	525	..Using magnetometer
		526	..Portable
		527	.Determination of travel data based on distance measured from a starting point
494	..Using non-inertial dead-reckoning apparatus		
495	...Having accuracy improvement of position or location	528	.Aircraft preflight route search
		529	.Great circle route search
496	....Correction for ellipticity of earth	530	.Including compensated direction finder (e.g., for compass deviation, etc.)
497	....Wind speed correction		
498	..Wheel sensor provides distance or heading information	531	.Space orbit or path
		532	.Employing map database system
499	...Including integrator	533	..Including route searching or determining
500	..Using inertial sensing (e.g., Inertial Navigation System (INS), etc.)	534	.Having error or fault correction
		535	..Using filter
501	...Having correction by non-inertial sensor	536	...Kalman
		537	.Using computer network (e.g., Internet, etc.)
502	...Using four or more accelerometers	538	.Having user interface
		539	..Speech recognition or synthesis

540 .Having particular data storage or retrieval  
 541 .Portable  
 300 **RELATIVE LOCATION**  
 301 .Collision avoidance  
 302 .Course to intercept

**FOREIGN ART COLLECTIONS****FOR 000 CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

**VEHICLE CONTROL, GUIDANCE,  
 OPERATION, OR INDICATION (701/  
 1)**

FOR 100 .Vehicle diagnosis or maintenance indication (701/29)  
 FOR 101 ..Indication of maintenance interval (701/30)  
 FOR 102 ..Self-test (701/31)  
 FOR 103 ..Vehicle or device ID (701/32)  
 FOR 104 ..Plural processors or external processor (701/33)  
 FOR 105 ..Detection of faulty sensor (701/34)  
 FOR 106 ..With data recording device (701/35)  
 FOR 107 **NAVIGATION (701/200)**  
 FOR 108 .Determination of travel data based on the start point and destination point (701/201)  
 FOR 109 ..Route pre-planning (701/202)  
 FOR 110 ..Great circle route (701/203)  
 FOR 111 .Determination of E.T.A. (701/204)  
 FOR 112 .Determination of along-track or cross-track deviations (701/205)  
 FOR 113 .Employing way point navigation (701/206)  
 FOR 114 .Employing position determining equipment (701/207)

FOR 115 ..For use in a map data base system (701/208)  
 FOR 116 ...Including route searching or determining device (701/209)  
 FOR 117 ...Route correction, modification, or verification (701/210)  
 FOR 118 ...Having audio or visual route guidance (701/211)  
 FOR 119 ...Having variable map scale (701/212)  
 FOR 120 ..Using Global Positioning System (GPS) (701/213)  
 FOR 121 ...Means to improve accuracy of position or location (701/214)  
 FOR 122 ...Having multiple GPS antennas or receivers (e.g., differential GPS) (701/215)  
 FOR 123 ...Having an self-contained position computing means (e.g., dead reckoning) (701/216)  
 FOR 124 ..Using dead-reckoning apparatus (701/217)  
 FOR 125 ..Using R-O (D.M.E. and path) or Tacan equipment (701/218)  
 FOR 126 ..Using Loran or Shoran or Decca equipment (701/219)  
 FOR 127 ..Using inertial sensor (701/220)  
 FOR 128 ...With correction by noninertial sensor (701/221)  
 FOR 129 ..Using star tracker (701/222)  
 FOR 130 ..With radar or optical ground scanner (701/223)  
 FOR 131 .With indicated course correction (compass deviation) (701/224)  
 FOR 132 .Determining range without range measurement (701/225)  
 FOR 133 .Space orbits or paths (701/226)



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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
123/574	1	701/29	728
178/18.05	1	701/223	34
184/1.5	1	701/29	728
244/158.4	1	701/226	51
318/573	1	701/29	728
327/238	1	701/200	509
340/426.24	1	701/207	525
340/576	1	701/29	728
340/903	1	701/200	509
340/995.1	1	701/200	509
340/995.14	1	701/211	366
	2	701/208	526
340/995.15	2	701/208	526
340/995.26	1	701/29	728
342/153	1	701/223	34
342/185	1	701/223	34
345/156	2	701/200	509
345/175	1	701/208	526
345/630	1	701/208	526
348/140	1	701/225	11
352/12	1	701/215	53
356/4.07	1	701/225	11

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356/5.01	1	701/225	11
359/843	1	701/213	614
382/181	1	701/207	525
434/35	1	701/35	314
455/423	1	701/207	525
455/569.2	1	701/211	366
700/115	1	701/29	728
701/1	1	701/200	509
	1	701/207	525
	1	701/210	181
	1	701/213	614
	1	701/33	225
	2	701/35	314
	6	701/29	728
701/102	1	701/29	728
701/123	1	701/30	51
701/124	1	701/33	225
701/13	1	701/213	614
	1	701/30	51
	1	701/34	109
	5	701/222	36

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	12	701/226	51
701/2	1	701/200	509
	1	701/214	114
	1	701/215	53
	1	701/216	39
	1	701/33	225
	3	701/206	58
	3	701/29	728
701/21	1	701/200	509
	1	701/207	525
	1	701/219	18
	2	701/206	58
	6	701/224	51
701/22	1	701/213	614
	1	701/29	728
701/23	1	701/205	30
	1	701/209	531
	1	701/210	181
	1	701/215	53
	1	701/220	161
	1	701/30	51

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	2	701/223	34
	2	701/29	728
	3	701/206	58
	6	701/200	509
	6	701/213	614
	10	701/207	525
701/25	1	701/202	192
	1	701/213	614
	2	701/214	114
	4	701/200	509
	4	701/209	531
701/26	1	701/210	181
701/28	1	701/207	525
701/29.1	1	701/200	509
	1	701/201	212
	1	701/208	526
	1	701/211	366
	3	701/35	314
	4	701/33	225
	7	701/31	39
	37	701/29	728
701/29.2	1	701/30	51

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	1	701/31	39
	1	701/32	23
	4	701/33	225
	10	701/35	314
	15	701/34	109
	36	701/29	728
701/29.3	1	701/207	525
	3	701/213	614
	7	701/30	51
	10	701/35	314
	18	701/33	225
	35	701/29	728
701/29.4	1	701/208	526
	1	701/34	109
	6	701/35	314
	8	701/33	225
	12	701/30	51
	20	701/29	728
701/29.5	2	701/33	225
	4	701/29	728
	13	701/30	51

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701/29.6	1	701/30	51
	1	701/34	109
	17	701/32	23
	18	701/33	225
	29	701/35	314
	34	701/29	728
701/29.7	1	701/31	39
	2	701/35	314
	3	701/29	728
	9	701/34	109
701/29.8	5	701/34	109
701/3	1	701/214	114
	2	701/204	34
	2	701/206	58
	2	701/226	51
	2	701/35	314
701/30.1	1	701/29	728
	5	701/34	109
701/30.2	5	701/34	109
	6	701/29	728
701/30.3	1	701/29	728

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	10	701/34	109
701/30.4	6	701/34	109
701/30.5	4	701/34	109
701/30.6	1	701/29	728
	6	701/34	109
701/30.7	2	701/29	728
	4	701/34	109
701/30.8	2	701/34	109
	3	701/29	728
701/30.9	2	701/29	728
	4	701/34	109
701/301	1	701/207	525
	1	701/29	728
701/31.1	5	701/29	728
	11	701/34	109
701/31.2	1	701/29	728
701/31.3	1	701/29	728
701/31.4	1	701/30	51
	1	701/31.4	1
	1	701/34	109
	2	701/33	225

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	3	701/31	39
	14	701/35	314
	30	701/33	225
	52	701/29	728
701/31.5	1	701/30	51
	1	701/31	39
	5	701/35	314
	18	701/33	225
	35	701/29	728
701/31.6	1	701/34	109
	4	701/35	314
	7	701/33	225
	28	701/29	728
701/31.7	1	701/35	314
	2	701/31	39
	2	701/34	109
	4	701/33	225
	17	701/29	728
701/31.8	1	701/35	314
	4	701/33	225
	7	701/29	728
701/31.9	1	701/30	51



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	1	701/33	225
	4	701/35	314
	21	701/29	728
701/32.1	1	701/33	225
	2	701/35	314
	7	701/29	728
701/32.2	1	701/31	39
	2	701/213	614
	5	701/29	728
	16	701/35	314
701/32.3	1	701/207	525
	1	701/30	51
	3	701/33	225
	8	701/29	728
	10	701/35	314
701/32.4	1	701/201	212
	1	701/30	51
	1	701/32	23
	1	701/34	109
	3	701/213	614
	6	701/29	728

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	6	701/33	225
	13	701/35	314
701/32.5	1	701/29	728
	23	701/35	314
701/32.6	1	701/200	509
	1	701/32	23
	4	701/29	728
	5	701/33	225
	13	701/35	314
701/32.7	1	701/30	51
	1	701/32	23
	1	701/34	109
	2	701/207	525
	2	701/31	39
	4	701/35	314
	6	701/33	225
	25	701/29	728
701/32.8	1	701/34	109
	1	701/35	314
	4	701/33	225
	6	701/31	39

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	17	701/29	728
701/32.9	1	701/33	225
	1	701/34	109
	4	701/35	314
	30	701/29	728
701/33.1	1	701/35	314
	2	701/33	225
	3	701/29	728
701/33.2	2	701/34	109
	3	701/35	314
	5	701/33	225
	23	701/29	728
701/33.3	1	701/33	225
	2	701/29	728
	5	701/35	314
701/33.4	1	701/207	525
	1	701/208	526
	1	701/211	366
	2	701/34	109
	3	701/31	39
	8	701/33	225

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	43	701/29	728
	77	701/35	314
701/33.5	1	701/29	728
	1	701/33	225
	1	701/35	314
701/33.6	1	701/31	39
	2	701/33	225
	2	701/34	109
	7	701/35	314
	27	701/29	728
701/33.7	1	701/207	525
	1	701/34	109
	1	701/35	314
	2	701/31	39
	24	701/29	728
701/33.8	1	701/30	51
	2	701/31	39
	4	701/33	225
	19	701/29	728
701/33.9	1	701/30	51
	1	701/33	225
	2	701/34	109

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	3	701/31	39
	6	701/35	314
	46	701/29	728
701/34.1	1	701/30	51
	1	701/31	39
	2	701/29	728
701/34.2	1	701/32	23
	2	701/33	225
	5	701/29	728
701/34.3	2	701/35	314
	6	701/29	728
	26	701/33	225
701/34.4	1	701/208	526
	1	701/213	614
	1	701/30	51
	1	701/31	39
	1	701/34	109
	1	701/35	314
	2	701/200	509
	4	701/33	225
	25	701/29	728

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/36	1	701/207	525
	1	701/209	531
	1	701/29	728
	1	701/32	23
	2	701/200	509
	4	701/213	614
	7	701/35	314
	11	701/33	225
701/37	1	701/205	30
	3	701/29	728
701/400	1	701/209	531
	1	701/221	39
	1	701/223	34
	1	701/225	11
	1	701/29	728
	2	701/202	192
	2	701/204	34
	2	701/213	614
	2	701/217	55
	3	701/207	525
	4	701/208	526

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	4	701/226	51
	7	701/211	366
	30	701/200	509
701/408	1	701/205	30
	1	701/209	531
	1	701/214	114
	1	701/225	11
	1	701/226	51
	1	701/29	728
	1	701/408	1
	3	701/201	212
	5	701/208	526
	7	701/211	366
	7	701/213	614
	9	701/200	509
	44	701/207	525
701/409	1	701/201	212
	1	701/210	181
	1	701/211	366
	1	701/217	55
	1	701/219	18

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/225	11
	1	701/35	314
	3	701/209	531
	3	701/216	39
	5	701/200	509
	9	701/213	614
	11	701/207	525
	42	701/208	526
701/41	1	701/200	509
701/410	1	701/203	10
	1	701/206	58
	1	701/35	314
	2	701/214	114
	2	701/216	39
	4	701/212	53
	5	701/211	366
	6	701/210	181
	7	701/207	525
	8	701/200	509
	9	701/201	212
	11	701/202	192
	11	701/213	614



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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	19	701/208	526
	58	701/209	531
701/411	1	701/206	58
	1	701/214	114
	2	701/207	525
	2	701/213	614
	3	701/202	192
	5	701/200	509
	5	701/208	526
	5	701/211	366
	6	701/201	212
	17	701/210	181
	21	701/209	531
701/412	1	701/202	192
	1	701/212	53
	1	701/220	161
	1	701/221	39
	3	701/200	509
	3	701/207	525
	3	701/211	366
	3	701/214	114

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	7	701/209	531
	8	701/201	212
	8	701/208	526
	8	701/210	181
	8	701/213	614
701/413	1	701/201	212
	1	701/208	526
	2	701/209	531
	4	701/210	181
701/414	1	701/213	614
	1	701/414	1
	2	701/207	525
	2	701/208	526
	2	701/211	366
	4	701/200	509
	4	701/202	192
	6	701/201	212
	15	701/209	531
	33	701/210	181
701/415	1	701/211	366
	2	701/200	509

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	3	701/202	192
	3	701/210	181
701/416	1	701/206	58
	1	701/212	53
	2	701/200	509
	2	701/202	192
	2	701/211	366
	4	701/201	212
	13	701/209	531
	19	701/210	181
701/417	1	701/202	192
	1	701/205	30
	1	701/207	525
	1	701/208	526
	1	701/211	366
	1	701/221	39
	2	701/201	212
	3	701/209	531
	12	701/210	181
701/418	1	701/200	509
	1	701/201	212

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/202	192
	5	701/209	531
	16	701/210	181
701/419	1	701/201	212
	1	701/211	366
	2	701/208	526
701/420	1	701/212	53
	1	701/33	225
	3	701/210	181
	3	701/213	614
	6	701/201	212
	6	701/208	526
	7	701/207	525
	10	701/211	366
	14	701/200	509
	17	701/202	192
	54	701/209	531
701/421	1	701/200	509
	1	701/201	212
	1	701/207	525
	2	701/202	192
	2	701/210	181

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/211	366
	4	701/208	526
	5	701/209	531
701/422	1	701/201	212
	1	701/208	526
	2	701/209	531
701/423	1	701/204	34
	1	701/212	53
	1	701/220	161
	3	701/211	366
	5	701/200	509
	6	701/213	614
	9	701/210	181
	10	701/208	526
	13	701/201	212
	13	701/202	192
	30	701/209	531
701/424	1	701/200	509
	1	701/202	192
	1	701/208	526
	1	701/210	181

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/213	614
	2	701/204	34
	16	701/209	531
701/425	2	701/213	614
	3	701/200	509
	3	701/207	525
	4	701/210	181
	5	701/201	212
	6	701/202	192
	6	701/208	526
	8	701/211	366
	22	701/209	531
701/426	2	701/206	58
	2	701/212	53
	3	701/202	192
	3	701/207	525
	4	701/213	614
	10	701/208	526
	10	701/211	366
	12	701/200	509
	20	701/201	212

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	24	701/209	531
701/427	1	701/200	509
	1	701/208	526
	1	701/210	181
	3	701/209	531
701/428	1	701/214	114
	1	701/216	39
	4	701/201	212
	5	701/207	525
	5	701/210	181
	7	701/200	509
	7	701/202	192
	8	701/208	526
	42	701/211	366
	63	701/209	531
701/429	1	701/201	212
	1	701/206	58
	1	701/217	55
	2	701/208	526
	2	701/209	531
	4	701/211	366

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/43	1	701/29	728
701/430	2	701/200	509
	3	701/208	526
	3	701/209	531
701/431	1	701/206	58
	1	701/210	181
	1	701/211	366
	1	701/431	1
	3	701/201	212
	5	701/207	525
	7	701/209	531
	8	701/200	509
	12	701/213	614
	39	701/208	526
	46	701/211	366
701/432	1	701/201	212
	1	701/207	525
	1	701/209	531
	1	701/212	53
	3	701/200	509
	3	701/208	526
	7	701/211	366



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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/433	1	701/213	614
	3	701/202	192
	3	701/209	531
	4	701/200	509
	5	701/207	525
	6	701/211	366
701/434	1	701/200	509
	1	701/201	212
	1	701/206	58
	1	701/209	531
	1	701/210	181
	1	701/221	39
	2	701/202	192
	2	701/207	525
	2	701/208	526
	2	701/211	366
701/435	1	701/211	366
701/436	1	701/206	58
	1	701/207	525
	1	701/210	181
	1	701/212	53

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/200	509
	4	701/209	531
	8	701/208	526
	15	701/211	366
701/437	1	701/207	525
	1	701/212	53
	2	701/208	526
	2	701/210	181
	5	701/200	509
	6	701/201	212
	6	701/209	531
	25	701/211	366
701/438	1	701/202	192
	2	701/207	525
	2	701/210	181
	3	701/213	614
	6	701/209	531
	7	701/200	509
	15	701/208	526
	25	701/211	366
701/439	1	701/202	192

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/204	34
	2	701/201	212
	2	701/207	525
	3	701/200	509
	4	701/209	531
	4	701/211	366
	8	701/208	526
701/440	1	701/206	58
	1	701/207	525
	1	701/208	526
	2	701/200	509
	2	701/213	614
	5	701/211	366
701/441	1	701/200	509
	4	701/211	366
701/442	1	701/200	509
	1	701/207	525
	2	701/209	531
	2	701/211	366
701/443	1	701/200	509
	1	701/208	526

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/213	614
	2	701/201	212
	2	701/209	531
	3	701/207	525
	16	701/211	366
701/444	1	701/213	614
	3	701/200	509
701/445	1	701/200	509
	1	701/204	34
	1	701/209	531
	1	701/213	614
	1	701/214	114
	7	701/207	525
	7	701/208	526
	8	701/217	55
701/446	1	701/214	114
	1	701/215	53
	1	701/223	34
	2	701/210	181
	3	701/201	212
	3	701/216	39
	3	701/220	161

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	5	701/217	55
	7	701/213	614
	8	701/200	509
	16	701/209	531
	22	701/207	525
	23	701/208	526
701/447	1	701/200	509
	2	701/208	526
701/448	1	701/207	525
	1	701/209	531
	1	701/211	366
	1	701/213	614
	1	701/214	114
	3	701/200	509
	4	701/208	526
701/449	1	701/213	614
	3	701/207	525
	3	701/208	526
701/450	1	701/207	525
	1	701/212	53
	1	701/213	614

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SOURCE CLASSIFICATION(S) OF PATENTS  
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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/200	509
	2	701/209	531
	2	701/210	181
	16	701/208	526
701/451	4	701/200	509
	12	701/208	526
701/452	7	701/208	526
701/453	1	701/35	314
	5	701/208	526
701/454	1	701/206	58
	1	701/212	53
	1	701/215	53
	1	701/219	18
	2	701/202	192
	2	701/204	34
	2	701/210	181
	2	701/216	39
	2	701/220	161
	3	701/214	114
	4	701/209	531
	7	701/201	212

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SOURCE CLASSIFICATION(S) OF PATENTS  
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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	8	701/211	366
	14	701/200	509
	18	701/207	525
	31	701/213	614
	36	701/208	526
701/455	2	701/209	531
	3	701/201	212
	4	701/207	525
	5	701/213	614
	8	701/200	509
	9	701/211	366
	13	701/208	526
	31	701/212	53
701/456	1	701/208	526
	1	701/211	366
	3	701/200	509
701/457	1	701/202	192
	1	701/204	34
	1	701/205	30
	1	701/214	114
	1	701/216	39

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SOURCE CLASSIFICATION(S) OF PATENTS  
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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/223	34
	1	701/30	51
	2	701/207	525
	3	701/209	531
	4	701/200	509
	4	701/213	614
	5	701/211	366
	15	701/208	526
701/458	1	701/209	531
	1	701/221	39
	5	701/208	526
701/459	1	701/207	525
	3	701/208	526
701/460	1	701/208	526
	1	701/213	614
	2	701/200	509
701/461	1	701/206	58
	1	701/211	366
	1	701/219	18
	2	701/207	525
	2	701/213	614
	6	701/209	531



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SOURCE CLASSIFICATION(S) OF PATENTS  
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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	7	701/200	509
	20	701/208	526
701/462	1	701/200	509
	4	701/208	526
701/463	1	701/200	509
	4	701/208	526
701/464	1	701/208	526
701/465	1	701/208	526
	1	701/210	181
	1	701/213	614
	2	701/209	531
	4	701/202	192
	4	701/207	525
	12	701/200	509
	15	701/204	34
	16	701/201	212
701/466	1	701/200	509
	1	701/206	58
	1	701/210	181
	1	701/214	114
	1	701/216	39

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SOURCE CLASSIFICATION(S) OF PATENTS  
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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/218	15
	1	701/219	18
	1	701/220	161
	2	701/224	51
	3	701/223	34
	5	701/207	525
	8	701/213	614
	15	701/205	30
701/467	1	701/208	526
	1	701/219	18
	2	701/201	212
	2	701/35	314
	3	701/211	366
	6	701/200	509
	7	701/213	614
	8	701/202	192
	18	701/207	525
	24	701/206	58
701/468	1	701/202	192
	1	701/204	34
	1	701/209	531

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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/219	18
	1	701/220	161
	1	701/222	36
	1	701/224	51
	1	701/226	51
	1	701/29	728
	2	701/214	114
	2	701/215	53
	4	701/208	526
	4	701/211	366
	4	701/35	314
	5	701/201	212
	13	701/200	509
	25	701/207	525
	57	701/213	614
701/469	1	701/201	212
	1	701/206	58
	1	701/208	526
	1	701/213	614
	1	701/220	161
	1	701/221	39

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SOURCE CLASSIFICATION(S) OF PATENTS  
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Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/224	51
	1	701/226	51
	2	701/215	53
	2	701/216	39
	6	701/200	509
	13	701/207	525
	15	701/214	114
	72	701/213	614
701/470	1	701/200	509
	1	701/211	366
	1	701/216	39
	1	701/225	11
	1	701/226	51
	2	701/220	161
	14	701/207	525
	19	701/214	114
	34	701/215	53
	54	701/213	614
701/471	1	701/207	525
	1	701/214	114
	1	701/216	39
	4	701/215	53

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	7	701/213	614
701/472	1	701/208	526
	1	701/222	36
	1	701/29	728
	1	701/35	314
	2	701/209	531
	2	701/215	53
	4	701/200	509
	4	701/217	55
	10	701/207	525
	11	701/221	39
	12	701/220	161
	19	701/216	39
	25	701/213	614
	29	701/214	114
701/473	1	701/213	614
	1	701/35	314
701/474	1	701/213	614
	1	701/215	53
701/475	1	701/207	525
	1	701/214	114

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	5	701/213	614
701/476	1	701/216	39
	3	701/213	614
	5	701/214	114
701/477	5	701/213	614
701/478	3	701/207	525
	3	701/214	114
	21	701/213	614
701/478.5	1	701/200	509
	1	701/207	525
	1	701/214	114
	3	701/213	614
701/479	2	701/207	525
	2	701/214	114
	8	701/213	614
701/480	1	701/200	509
	1	701/207	525
	1	701/221	39
	2	701/220	161
	2	701/226	51
	3	701/214	114

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	6	701/213	614
701/481	1	701/214	114
	2	701/213	614
701/482	2	701/201	212
	2	701/215	53
	3	701/200	509
	3	701/207	525
	15	701/213	614
701/483	1	701/209	531
	6	701/213	614
701/484	1	701/201	212
	2	701/208	526
	6	701/207	525
	51	701/213	614
701/485	1	701/201	212
	3	701/207	525
	9	701/213	614
701/486	1	701/208	526
	1	701/210	181
	6	701/213	614
701/487	1	701/211	366

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/201	212
	3	701/207	525
	4	701/200	509
	30	701/213	614
701/488	1	701/200	509
	1	701/207	525
	3	701/213	614
701/489	1	701/207	525
	4	701/213	614
701/49	1	701/35	314
701/490	3	701/200	509
	9	701/213	614
701/491	1	701/207	525
	2	701/200	509
	9	701/213	614
701/492	1	701/204	34
	1	701/211	366
	1	701/217	55
	1	701/224	51
	1	701/225	11
	3	701/207	525
	14	701/218	15



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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/493	1	701/213	614
	1	701/220	161
	2	701/207	525
	9	701/219	18
701/494	1	701/224	51
	2	701/200	509
	4	701/207	525
	12	701/217	55
701/495	1	701/205	30
	1	701/214	114
	2	701/221	39
	2	701/224	51
	3	701/207	525
	10	701/217	55
701/496	1	701/217	55
701/497	4	701/217	55
701/498	1	701/200	509
	1	701/201	212
	1	701/207	525
	1	701/217	55
701/499	2	701/217	55

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/50	1	701/208	526
	1	701/211	366
	1	701/29	728
	1	701/34	109
	2	701/214	114
	3	701/213	614
	4	701/207	525
701/500	1	701/200	509
	1	701/208	526
	3	701/222	36
	7	701/207	525
	28	701/220	161
701/501	1	701/207	525
	1	701/211	366
	1	701/213	614
	1	701/222	36
	2	701/214	114
	9	701/220	161
	13	701/221	39
701/502	1	701/207	525
	1	701/217	55

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	7	701/220	161
701/503	1	701/207	525
	3	701/220	161
701/504	1	701/200	509
	2	701/207	525
	17	701/220	161
701/505	1	701/221	39
	1	701/222	36
	1	701/224	51
	4	701/207	525
	27	701/220	161
701/506	2	701/220	161
701/507	1	701/207	525
	1	701/208	526
	1	701/209	531
	1	701/214	114
	1	701/221	39
	15	701/220	161
701/508	1	701/207	525
	1	701/221	39
	1	701/224	51

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	5	701/220	161
701/509	1	701/200	509
	1	701/205	30
	4	701/220	161
701/51	1	701/208	526
701/510	1	701/207	525
	1	701/210	181
	1	701/214	114
	1	701/221	39
	1	701/223	34
	2	701/213	614
	10	701/220	161
701/511	1	701/214	114
	1	701/221	39
	2	701/220	161
701/512	1	701/213	614
	4	701/220	161
701/513	1	701/200	509
	1	701/217	55
	1	701/223	34
	2	701/207	525
	4	701/226	51

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	23	701/222	36
701/514	1	701/209	531
	1	701/213	614
	1	701/214	114
	1	701/226	51
	8	701/200	509
	11	701/207	525
	19	701/223	34
701/515	1	701/200	509
	1	701/210	181
	1	701/211	366
	1	701/213	614
	1	701/31	39
	4	701/207	525
701/516	1	701/204	34
	1	701/210	181
	2	701/202	192
	3	701/203	10
	3	701/211	366
	4	701/201	212
	4	701/213	614

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	19	701/200	509
	22	701/207	525
701/517	1	701/204	34
	1	701/213	614
	2	701/211	366
	3	701/201	212
	3	701/209	531
	6	701/213	614
	12	701/200	509
	30	701/207	525
701/518	1	701/200	509
	1	701/213	614
	1	701/217	55
	1	701/222	36
	1	701/223	34
	2	701/209	531
	26	701/207	525
701/519	1	701/202	192
	1	701/213	614
	2	701/200	509
	2	701/205	30

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	2	701/208	526
	9	701/207	525
701/520	1	701/208	526
	1	701/210	181
	1	701/219	18
	5	701/207	525
	11	701/200	509
701/521	1	701/202	192
	1	701/210	181
	1	701/213	614
	1	701/226	51
	2	701/200	509
	2	701/201	212
	2	701/209	531
	5	701/35	314
	11	701/207	525
701/522	1	701/208	526
	1	701/213	614
	2	701/207	525
	5	701/200	509
701/523	1	701/210	181

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/213	614
	1	701/216	39
	1	701/225	11
	2	701/209	531
	3	701/200	509
	3	701/207	525
	3	701/211	366
701/524	1	701/207	525
701/525	4	701/207	525
701/526	1	701/201	212
	2	701/200	509
	2	701/208	526
	2	701/209	531
	2	701/213	614
	3	701/207	525
701/527	1	701/204	34
	1	701/209	531
	1	701/33	225
	1	701/35	314
	4	701/200	509
	4	701/207	525
	11	701/201	212



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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
701/528	1	701/201	212
	1	701/205	30
	1	701/209	531
	7	701/200	509
	8	701/206	58
	10	701/202	192
701/529	6	701/203	10
701/530	1	701/200	509
	11	701/207	525
	34	701/224	51
701/531	1	701/214	114
	20	701/226	51
701/532	1	701/205	30
	1	701/206	58
	1	701/225	11
	1	701/532	1
	2	701/202	192
	2	701/208	526
	2	701/209	531
	3	701/201	212
	3	701/210	181

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	5	701/212	53
	8	701/207	525
	9	701/211	366
	35	701/200	509
	63	701/208	526
701/533	1	701/204	34
	1	701/206	58
	1	701/207	525
	1	701/533	1
	2	701/201	212
	2	701/207	525
	2	701/209	531
	2	701/212	53
	6	701/210	181
	12	701/208	526
	16	701/211	366
	19	701/200	509
	22	701/201	212
	65	701/202	192
	72	701/209	531
701/534	1	701/214	114

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SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/223	34
	4	701/200	509
701/535	1	701/200	509
	1	701/201	212
	1	701/208	526
701/536	1	701/213	614
	4	701/200	509
	5	701/207	525
701/537	1	701/201	212
	1	701/202	192
	1	701/205	30
	1	701/211	366
	1	701/213	614
	2	701/210	181
	11	701/200	509
701/538	1	701/207	525
	1	701/209	531
	2	701/201	212
	2	701/202	192
	2	701/208	526
	10	701/211	366

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	32	701/200	509
701/539	1	701/207	525
	3	701/200	509
	5	701/211	366
701/540	1	701/209	531
	1	701/29	728
	2	701/201	212
	3	701/208	526
	9	701/200	509
701/541	1	701/207	525
	1	701/208	526
	1	701/211	366
	1	701/215	53
	3	701/200	509
701/69	1	701/210	181
701/7	1	701/221	39
701/70	1	701/200	509
	1	701/205	30
	2	701/29	728
701/71	1	701/207	525
	1	701/30	51
	1	701/33	225

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
	1	701/35	314
701/9	1	701/205	30
701/93	1	701/205	30
	1	701/207	525
	1	701/213	614
	1	701/30	51
	2	701/200	509
	6	701/208	526
701/99	1	701/201	212
	1	701/202	192
	2	701/33	225
	3	701/29	728
702/150	1	701/207	525
702/152	1	701/33	225
702/183	1	701/31	39
	1	701/33	225
	1	701/35	314
702/184	1	701/29	728
	1	701/30	51
	1	701/35	314
702/185	3	701/29	728

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
702/186	1	701/29	728
702/35	1	701/29	728
702/55	3	701/202	192
702/58	1	701/29	728
703/1	2	701/208	526
703/2	1	701/225	11
704/224	1	701/224	51
705/20	1	701/204	34
705/4	1	701/207	525
705/5	1	701/209	531
705/7.12	1	701/202	192
705/7.16	1	701/202	192
705/7.25	1	701/207	525
707/705	1	701/208	526
	1	701/211	366
708/167	1	701/200	509
708/203	1	701/214	114
709/201	1	701/201	212
	1	701/33	225
709/219	1	701/219	18
710/63	1	701/200	509

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PROJECT - EA701

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
711/201	1	701/201	212
712/1	1	701/29	728
73/114.61	1	701/29	728
73/115.02	1	701/29	728
73/146	1	701/34	109
73/167	1	701/35	314
73/40	1	701/29	728
73/489	1	701/35	314
73/669	1	701/33	225

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/34	109	701/31.1	11
701/29	728	701/31.8	7
701/31	39	701/33.4	3
701/201	212	701/414	6
701/211	366	701/415	1
701/201	212	701/419	1
701/211	366	701/421	2
701/212	53	701/423	1
701/211	366	701/432	7
		701/439	4
701/220	161	701/446	3
701/213	614	701/449	1
701/207	525	701/455	4
701/208	526	701/457	15
701/207	525	701/459	1
701/216	39	701/471	1
701/200	509	701/482	3
701/217	55	701/497	4
701/220	161	701/511	2
701/207	525	701/515	4
701/202	192	701/528	10
701/32	23	701/29.2	1
701/31	39	701/29.7	1
701/208	526	701/33.4	1
701/31	39	701/33.7	2
701/34	109	701/34.4	1
701/220	161	701/412	1
701/202	192	701/416	2
701/208	526	701/439	8
701/207	525	701/440	1
701/215	53	701/474	1
701/213	614	701/483	6
701/221	39	701/495	2
701/214	114	701/507	1
		701/511	1
701/223	34	701/514	19
701/210	181	701/521	1
701/225	11	701/523	1
701/200	509	701/523	3
701/208	526	701/526	2
701/33	225	701/29.1	4
		701/29.6	18
701/34	109	701/30.4	6



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DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/29	728	701/30.6	1
701/34	109	701/31.7	2
		701/32.9	1
701/35	314	701/33.3	5
		701/33.7	1
701/209	531	701/400	1
		701/412	7
701/210	181	701/466	1
701/213	614	701/480	6
		701/486	6
701/210	181	701/486	1
701/219	18	701/493	9
701/220	161	701/506	2
701/219	18	701/520	1
701/202	192	701/537	1
701/208	526	701/29.1	1
701/30	51	701/32.3	1
701/201	212	701/32.4	1
701/35	314	701/32.7	4
701/31	39	701/33.9	3
701/213	614	701/409	9
701/205	30	701/417	1
701/208	526	701/421	4
701/202	192	701/421	2
701/211	366	701/435	1
701/209	531	701/465	2
701/217	55	701/518	1
701/35	314	701/521	5
701/207	525	701/525	4
701/210	181	701/532	3
701/30	51	701/29.3	7
701/34	109	701/29.7	9
701/213	614	701/32.2	2
701/223	34	701/400	1
701/225	11	701/408	1
701/200	509	701/409	5
701/208	526	701/413	1
701/211	366	701/426	10
701/209	531	701/429	2
701/208	526	701/453	5
701/211	366	701/455	9
701/213	614	701/466	8
701/214	114	701/481	1

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/200	509	701/539	3
701/207	525	701/29.3	1
701/33	225	701/32.3	3
701/31	39	701/32.7	2
701/221		701/400	1
701/211	366	701/411	5
701/214	114	701/411	1
701/211	366	701/414	2
701/208	526	701/422	1
701/217	55	701/429	1
701/202	192	701/454	2
701/208	526	701/455	13
		701/458	5
701/220	161	701/470	2
701/200	509	701/490	3
		701/520	11
701/212	53	701/532	5
701/211	366	701/533	16
701/201	212	701/29.1	1
701/34	109	701/30.1	5
701/29	728	701/31.6	28
701/30	51	701/31.9	1
701/207	525	701/32.7	2
701/226	51	701/408	1
701/221	39	701/412	1
701/220	161	701/423	1
701/208	526	701/432	3
701/201	212	701/432	1
701/213	614	701/433	1
701/209	531	701/437	6
701/201	212	701/437	6
701/200	509	701/460	2
701/202	192	701/465	4
701/216	39	701/469	2
701/207	525	701/501	1
		701/502	1
701/200	509	701/504	1
		701/519	2
701/209	531	701/521	2
701/201	212	701/528	1
701/207	525	701/536	5
701/31	39	701/29.1	7
701/29	728	701/30.8	3

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DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/35	314	701/32.1	2
701/207	525	701/411	2
701/202	192	701/426	3
701/200	509	701/432	3
701/208	526	701/460	1
		701/463	4
701/201	212	701/484	1
701/200	509	701/498	1
701/220	161	701/504	17
701/222	36	701/513	23
701/213	614	701/514	1
701/210	181	701/520	1
701/408	1	701/408	1
701/532		701/532	1
701/219	18	701/21	1
701/200	509	701/21	1
701/207	525	701/1	1
701/206	58	701/2	3
701/29	728	318/573	1
701/206	58	701/3	2
701/29	728	701/99	3
701/209	531	701/36	1
701/208	526	707/705	1
701/33	225	73/669	1
701/215	53	701/2	1
701/213	614	701/50	3
701/210	181	701/1	1
701/207	525	340/426.24	1
701/224	51	701/21	6
701/200	509	340/903	1
701/207	525	701/36	1
701/211	366	701/50	1
701/33	225	709/201	1
		702/183	1
701/35	314	701/29.3	10
701/33	225	701/33.3	1
701/207	525	701/400	3
701/225	11	701/409	1
701/214	114	701/410	2
701/200	509	701/411	5
701/211	366	701/417	1
701/209	531	701/418	5
701/207	525	701/425	3

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/208	526	701/427	1
701/207	525	701/433	5
701/209	531	701/433	3
701/208	526	701/434	2
		701/436	8
701/219	18	701/467	1
701/213	614	701/493	1
701/207	525	701/514	11
701/30	51	701/29.2	1
701/29	728	701/29.7	3
701/33	225	701/31.7	4
701/35	314	701/32.3	10
701/208	526	701/417	1
701/213	614	701/426	4
701/209	531	701/431	7
701/207	525	701/445	7
701/200	509	701/445	1
		701/456	3
701/208	526	701/459	3
701/214	114	701/466	1
701/29	728	701/468	1
701/207	525	701/485	3
701/213	614	701/522	1
701/207	525	701/532	8
701/30	51	701/29.6	1
701/33	225	701/32.8	4
701/29	728	701/408	1
701/202	192	701/417	1
701/206	58	701/426	2
701/201	212	701/428	4
701/208	526	701/429	2
701/200	509	701/431	8
701/211	366	701/441	4
701/213	614	701/518	1
701/223	34	701/518	1
701/200	509	701/530	1
701/211	366	701/400	7
701/210	181	701/417	12
701/201	212	701/422	1
701/208	526	701/428	8
701/211	366	701/433	6
701/208	526	701/437	2
701/204	34	701/445	1

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/216	39	701/446	3
701/200	509	701/465	12
701/221	39	701/469	1
701/35	314	701/472	1
701/220	161	701/502	7
701/202	192	701/532	2
701/200	509	701/536	4
701/201	212	701/537	1
701/30	51	701/29.4	12
701/29	728	701/33.8	19
		701/33.9	46
701/31	39	701/34.4	1
701/216		701/409	3
701/210	181	701/418	16
701/208	526	701/440	1
701/213	614	701/443	1
701/209	531	701/448	1
		701/455	2
701/207	525	701/480	1
701/208	526	701/535	1
701/33	225	701/34.4	4
701/210	181	701/415	3
701/200	509	701/437	5
701/202	192	701/438	1
		701/439	1
701/213	614	701/440	2
701/207	525	701/442	1
		701/443	3
701/208	526	701/452	7
701/214	114	701/454	3
701/204	34	701/457	1
701/209	531	701/458	1
701/216	39	701/472	19
701/214	114	701/478.5	1
701/207	525	701/508	1
		701/527	4
701/29	728	701/34.2	5
701/213	614	701/425	2
701/207	525	701/428	5
701/200	509	701/430	2
701/201	212	701/439	2
701/208	526	701/447	2
		701/456	1

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/224	51	701/505	1
701/201	212	701/517	3
701/34	109	701/29.4	1
701/209	531	701/408	1
701/210	181	701/416	19
701/201	212	701/454	7
701/207	525	701/472	10
701/204	34	701/492	1
701/207	525	701/513	2
701/211	366	701/516	3
701/213	614	701/519	1
701/200	509	701/527	4
		701/532	35
701/209	531	701/533	2
701/208	526	701/532	2
701/201	212	701/533	2
701/214	114	701/2	1
701/29	728	702/184	1
701/200	509	701/2	1
701/30	51	701/13	1
701/205	30	701/23	1
701/33	225	701/1	1
701/31	39	702/183	1
701/32	23	701/36	1
701/29	728	73/40	1
701/208	526	345/175	1
701/200	509	710/63	1
701/30	51	701/23	1
701/213	614	701/1	1
701/33	225	701/124	1
701/213	614	701/93	1
701/33	225	701/71	1
701/35	314	434/35	1
701/201	212	701/99	1
701/225	11	356/5.01	1
701/29	728	701/32.1	7
701/35	314	701/32.9	4
701/207	525	701/432	1
		701/436	1
701/200	509	701/468	13
		701/472	4
701/217	55	701/495	10
701/213	614	701/516	4

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/201	212	701/526	1
701/33	225	701/29.4	8
701/35	314	701/29.4	6
701/29	728	701/32.3	8
701/207	525	701/33.4	1
701/206	58	701/411	1
701/200	509	701/414	4
		701/421	1
		701/441	1
701/201	212	701/446	3
701/210	181	701/446	2
701/213	614	701/450	1
701/200	509	701/457	4
701/213	614	701/461	2
701/208	526	701/465	1
701/210	181	701/465	1
701/207	525	701/467	18
701/201	212	701/467	2
701/35	314	701/468	4
701/215	53	701/468	2
701/214	114	701/472	29
701/213	614	701/489	4
701/201	212	701/498	1
701/221	39	701/507	1
701/226	51	701/513	4
701/207	525	701/518	26
701/33	225	701/31.4	30
701/35	314	701/32.8	1
701/34	109	701/33.2	2
701/35	314	701/33.4	77
		701/409	1
701/202	192	701/423	13
701/210	181	701/427	1
701/216	39	701/428	1
701/201	212	701/455	3
701/221	39	701/458	1
701/220	161	701/480	2
701/213	614	701/490	9
701/208	526	701/522	1
701/35	314	701/527	1
701/214	114	701/534	1
701/29	728	701/31.5	35
		701/31.7	17

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/35	314	701/31.9	4
701/33	225	701/31.9	1
701/29	728	701/33.3	2
701/207	525	701/409	11
701/203	10	701/410	1
701/204	34	701/423	1
701/202	192	701/467	8
701/226	51	701/470	1
701/214	114	701/471	1
701/216	39	701/476	1
701/207	525	701/484	6
701/223	34	701/513	1
701/226	51	701/531	20
701/206	58	701/532	1
701/201	212	701/540	2
701/35	314	701/31.6	4
701/33	225	701/32.1	1
701/29	728	701/34.1	2
701/35	314	701/34.3	2
701/201	212	701/411	6
701/207	525	701/412	3
701/209	531	701/417	3
		701/434	1
701/210	181	701/436	1
701/208	526	701/472	1
701/213	614	701/477	5
701/214	114	701/479	2
701/204	34	701/516	1
701/208	526	701/532	63
701/209	531	701/540	1
701/29	728	701/31.2	1
701/35	314	701/31.7	1
701/29	728	701/32.7	25
701/33	225	701/33.6	2
701/200	509	701/34.4	2
701/212	53	701/416	1
701/210	181	701/420	3
701/211	366	701/431	46
701/209	531	701/436	4
701/207	525	701/439	2
701/211	366	701/443	16
701/207	525	701/457	2
701/214	114	701/478	3



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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/207	525	701/516	22
701/213	614	701/523	1
701/210	181	701/533	6
701/200	509	701/534	4
701/208	526	701/540	3
701/29	728	701/30.3	1
701/34	109	701/30.7	4
701/33	225	701/32.6	5
701/29	728	701/32.9	30
		701/33.1	3
701/208	526	701/408	5
701/35	314	701/410	1
701/221	39	701/417	1
701/200	509	701/436	2
701/211	366	701/442	2
701/214	114	701/469	15
701/213	614	701/472	25
701/207	525	701/492	3
701/220	161	701/500	28
701/222	36	701/500	3
701/210	181	701/515	1
701/200	509	701/522	5
		701/540	9
701/29	728	701/32.8	17
701/207	525	701/33.7	1
701/30	51	701/34.4	1
701/213	614	701/408	7
701/201	212	701/413	1
701/210	181	701/438	2
701/209	531	701/442	2
701/207	525	701/470	14
701/222	36	701/505	1
701/204	34	701/517	1
701/211	366	701/431	1
701/213	614	701/36	4
701/208	526	703/1	2
701/207	525	455/423	1
701/213	614	701/13	1
701/209	531	705/5	1
701/226	51	701/13	12
701/35	314	702/184	1
701/211	366	455/569.2	1
		707/705	1

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/220	161	701/23	1
701/29	728	340/576	1
701/207	525	701/301	1
701/29	728	340/995.26	1
		184/1.5	1
701/211	366	340/995.14	1
701/35	314	701/1	2
701/214	114	701/25	2
701/226	51	244/158.4	1
701/207	525	701/93	1
701/35	314	701/33.5	1
701/212	53	701/410	4
701/202	192	701/415	3
701/210	181	701/437	2
701/209	531	701/446	16
701/208	526	701/451	12
701/211	366	701/457	5
		701/467	3
701/220	161	701/472	12
701/222	36	701/501	1
701/207	525	701/505	4
701/33	225	701/527	1
701/205	30	701/528	1
701/200	509	701/29.1	1
701/213	614	701/32.4	3
701/30	51	701/32.7	1
701/35	314	701/33.9	6
701/200	509	701/433	4
701/208	526	701/438	15
701/220	161	701/454	2
701/200	509	701/455	8
701/208	526	701/464	1
		701/468	4
701/219	18	701/468	1
701/211	366	701/501	1
701/202	192	701/516	2
701/29	728	701/540	1
701/33	225	701/32.7	6
701/200	509	701/408	9
701/209	531	701/413	2
701/202	192	701/433	3
701/211	366	701/438	25
701/200	509	701/444	3

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
		701/448	3
701/208	526	701/450	16
701/224	51	701/469	1
701/200	509	701/487	4
701/207	525	701/530	11
701/34	109	701/30.8	2
701/29	728	701/33.2	23
701/200	509	701/418	1
701/210	181	701/424	1
701/211	366	701/436	15
701/206	58	701/454	1
701/207	525	701/469	13
701/214	114	701/475	1
		701/495	1
701/205	30	701/509	1
701/211	366	701/515	1
701/213	614	701/526	2
701/206	58	701/528	8
701/211	366	701/537	1
701/34	109	701/30.2	5
701/35	314	701/32.2	16
701/34	109	701/33.4	2
701/214	114	701/408	1
701/200	509	701/412	3
701/201	212	701/412	8
701/209	531	701/420	54
701/200	509	701/424	1
701/202	192	701/424	1
701/209	531	701/430	3
701/208	526	701/443	1
		701/454	36
701/209	531	701/454	4
701/226	51	701/468	1
701/221	39	701/501	13
701/212	53	701/533	2
701/211	366	701/29.1	1
701/33	225	701/31.5	18
701/29	728	701/32.5	1
701/35	314	701/32.6	13
701/213	614	701/400	2
701/209	531	701/416	13
701/208	526	701/420	6
		701/423	10

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/209	531	701/445	1
701/215	53	701/446	1
701/200	509	701/447	1
701/207	525	701/465	4
701/220	161	701/469	1
701/213	614	701/470	54
701/215	53	701/470	34
701/223	34	701/510	1
701/207	525	701/510	1
701/203	10	701/516	3
701/202	192	701/519	1
701/201	212	701/533	22
701/208	526	701/29.4	1
701/33	225	701/31.6	7
701/31	39	701/34.1	1
701/208	526	701/414	2
701/206	58	701/431	1
701/212	53	701/436	1
701/223	34	701/446	1
701/213	614	701/460	1
701/222	36	701/472	1
701/209	531	701/514	1
701/222	36	701/518	1
701/213	614	701/536	1
701/205	30	701/537	1
701/29	728	701/30.2	6
701/210	181	701/409	1
701/214	114	701/412	3
701/210	181	701/414	33
701/200	509	701/427	1
701/211	366	701/429	4
701/208	526	701/449	3
701/206	58	701/461	1
701/201	212	701/487	2
701/207	525	701/495	3
701/210	181	701/516	1
701/211	366	701/541	1
701/207	525	701/541	1
701/31.4	1	701/31.4	1
701/207	525	701/533	1
701/206	58	701/21	2
701/29	728	123/574	1
		702/58	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/210	181	701/23	1
701/34	109	73/146	1
701/204	34	701/3	2
701/29	728	701/37	3
701/221	39	701/7	1
701/214	114	701/3	1
701/202	192	705/7.12	1
701/223	34	342/185	1
701/29	728	701/50	1
701/208	526	345/630	1
701/29	728	700/115	1
701/213	614	701/23	6
701/208	526	701/51	1
701/202	192	701/99	1
		702/55	3
701/207	525	705/7.25	1
701/200	509	701/23	6
701/208	526	701/93	6
701/219	18	709/219	1
701/209	531	701/23	1
701/33	225	701/2	1
701/30	51	701/123	1
701/34	109	701/29.2	15
701/29	728	701/29.3	35
701/33	225	701/33.4	8
701/29	728	701/33.5	1
701/210	181	701/428	5
701/214	114	701/446	1
701/200	509	701/461	7
701/215	53	701/469	2
701/207	525	701/471	1
701/215	53	701/471	4
701/213	614	701/474	1
701/207	525	701/487	3
701/220	161	701/509	4
701/205	30	701/519	2
701/202	192	701/521	1
701/214	114	701/531	1
701/211	366	701/538	10
701/207	525	701/539	1
701/33	225	701/32.4	6
701/32	23	701/32.6	1
701/226	51	701/400	4

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DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/208	526	701/412	8
701/209	531	701/414	15
701/201	212	701/416	4
701/208	526	701/424	1
701/210	181	701/434	1
701/213	614	701/438	3
701/200	509	701/443	1
701/217	55	701/445	8
701/202	192	701/468	1
701/213	614	701/481	2
701/221	39	701/510	1
701/209	531	701/528	1
701/224	51	701/530	34
701/33	225	701/34.2	2
701/202	192	701/411	3
701/200	509	701/425	3
701/208	526	701/446	23
701/200	509	701/450	2
701/209	531	701/483	1
701/207	525	701/522	2
		701/538	1
701/200	509	701/541	3
701/34	109	701/31.4	1
701/30	51	701/31.4	1
701/34	109	701/31.6	1
701/33	225	701/32.9	1
701/200	509	701/410	8
701/202	192	701/410	11
701/208	526	701/411	5
701/209	531	701/425	22
701/201	212	701/425	5
701/202	192	701/425	6
701/201	212	701/426	20
701/212	53	701/432	1
701/207	525	701/437	1
701/200	509	701/438	7
701/209	531	701/461	6
701/225	11	701/492	1
701/220	161	701/501	9
701/224	51	701/508	1
701/209	531	701/526	2
701/204	34	701/527	1
701/203	10	701/529	6

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DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/209	531	701/533	72
701/33	225	701/33.8	4
701/201	212	701/408	3
701/211	366	701/409	1
701/201	212	701/410	9
701/211	366	701/412	3
701/209	531	701/422	2
701/211	366	701/425	8
701/220	161	701/468	1
701/207	525	701/479	2
701/202	192	701/533	65
701/210	181	701/537	2
701/208	526	701/538	2
701/33	225	701/29.2	4
701/29	728	701/29.4	20
701/31	39	701/31.5	1
701/200	509	701/400	30
701/213	614	701/414	1
701/200	509	701/415	2
701/213	614	701/423	6
701/214	114	701/428	1
701/200	509	701/446	8
701/212	53	701/454	1
		701/455	31
701/213	614	701/478	21
701/207	525	701/491	1
701/209	531	701/527	1
701/29	728	701/31.1	5
701/34	109	701/33.6	2
701/208	526	701/430	3
701/201	212	701/434	1
701/209	531	701/439	4
701/200	509	701/440	2
701/213	614	701/448	1
701/207	525	701/461	2
701/200	509	701/462	1
701/211	366	701/468	4
701/207	525	701/478	3
		701/507	1
701/31	39	701/515	1
701/211	366	701/532	9
701/207	525	701/533	2
701/213	614	701/29.3	3

DECEMBER 06, 2011

PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/35	314	701/31.5	5
701/32	23	701/32.7	1
701/33	225	701/34.3	26
		701/420	1
701/208	526	701/425	6
		701/426	10
701/211	366	701/437	25
701/200	509	701/439	3
		701/451	4
701/205	30	701/457	1
701/223	34	701/457	1
701/201	212	701/469	1
701/225	11	701/470	1
701/211	366	701/470	1
701/209	531	701/472	2
701/201	212	701/485	1
701/218	15	701/492	14
701/214	114	701/501	2
701/207	525	701/517	30
701/226	51	701/521	1
701/213	614	701/517	1
701/414	1	701/414	1
701/35	314	701/36	7
701/208	526	701/50	1
701/205	30	701/70	1
701/200	509	701/1	1
		701/70	1
701/35	314	701/71	1
701/29	728	73/115.02	1
701/223	34	178/18.05	1
701/207	525	701/50	4
701/202	192	701/25	1
701/201	212	711/201	1
701/206	58	701/23	3
701/225	11	356/4.07	1
701/213	614	701/25	1
701/222	36	701/13	5
701/29	728	701/36	1
		712/1	1
701/200	509	701/25	4
701/29	728	701/1	6
701/207	525	701/28	1
		701/71	1



DECEMBER 06, 2011

PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/29	728	701/43	1
701/201	212	709/201	1
701/208	526	340/995.14	2
701/200	509	701/41	1
701/33	225	701/29.5	2
701/31	39	701/32.8	6
701/29	728	701/33.6	27
701/31	39	701/33.8	2
701/209	531	701/411	21
701/212	53	701/412	1
701/210	181	701/423	9
701/212	53	701/437	1
701/207	525	701/450	1
701/213	614	701/457	4
701/211	366	701/461	1
701/213	614	701/465	1
701/29	728	701/30.1	1
701/35	314	701/32.5	23
701/217	55	701/400	2
701/206	58	701/429	1
701/221	39	701/434	1
701/214	114	701/448	1
701/212	53	701/450	1
701/213	614	701/467	7
701/208	526	701/467	1
701/211	366	701/492	1
701/214	114	701/510	1
701/200	509	701/514	8
701/209	531	701/518	2
701/207	525	701/523	3
701/32	23	701/29.6	17
701/35	314	701/31.4	14
		701/32.4	13
701/34	109	701/32.7	1
701/29	728	701/400	1
701/201	212	701/420	6
701/211	366	701/434	2
701/204	34	701/465	15
701/206	58	701/466	1
701/208	526	701/469	1
701/217	55	701/472	4
701/207	525	701/482	3
		701/498	1

DECEMBER 06, 2011

## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/200	509	701/513	1
701/207	525	701/524	1
701/200	509	701/526	2
		701/528	7
701/35	314	701/29.2	10
701/29	728	701/30.9	2
701/35	314	701/33.2	3
701/30	51	701/33.9	1
701/35	314	701/34.4	1
701/202	192	701/412	1
701/201	212	701/421	1
701/209	531	701/421	5
701/213	614	701/431	12
701/209	531	701/443	2
701/221	39	701/480	1
701/226	51	701/480	2
		701/514	1
701/29	728	701/31.4	52
		701/31.9	21
701/211	366	701/408	7
701/207	525	701/410	7
701/211	366	701/410	5
701/202	192	701/418	2
701/212	53	701/420	1
701/204	34	701/439	1
701/35	314	701/453	1
701/207	525	701/454	18
701/206	58	701/469	1
701/200	509	701/494	2
701/217	55	701/502	1
701/200	509	701/521	2
701/29	728	701/32.2	5
		701/34.4	25
701/209	531	701/423	30
701/211	366	701/448	1
701/208	526	701/448	4
701/210	181	701/450	2
701/206	58	701/467	24
701/213	614	701/469	72
		701/475	5
701/220	161	701/505	27
701/206	58	701/533	1
701/201	212	701/538	2

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/34	109	701/32.4	1
701/32	23	701/32.4	1
701/209	531	701/428	63
701/202	192	701/428	7
701/201	212	701/431	3
701/213	614	701/445	1
		701/468	57
701/221	39	701/472	11
701/207	525	701/478.5	1
701/214	114	701/480	3
701/207	525	701/519	9
701/200	509	701/533	19
701/201	212	701/535	1
701/35	314	701/29.1	3
701/207	525	701/32.3	1
701/204	34	701/400	2
701/210	181	701/410	6
701/206	58	701/410	1
701/210	181	701/425	4
701/207	525	701/448	1
701/204	34	701/454	2
701/30	51	701/457	1
701/207	525	701/466	5
701/226	51	701/469	1
701/220	161	701/507	15
701/213	614	701/510	2
		701/515	1
701/209	531	701/532	2
701/213	614	701/469	1
701/29	728	702/186	1
701/210	181	701/69	1
701/204	34	705/20	1
701/226	51	701/3	2
701/215	53	352/12	1
701/200	509	701/36	2
701/210	181	701/26	1
701/205	30	701/9	1
701/202	192	705/7.16	1
701/29	728	701/2	3
701/225	11	703/2	1
701/30	51	702/184	1
701/33	225	702/152	1
701/213	614	701/22	1

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/207	525	705/4	1
701/35	314	701/3	2
701/207	525	701/21	1
701/30	51	701/71	1
701/35	314	73/489	1
701/29	728	702/35	1
		701/301	1
701/200	509	345/156	2
701/207	525	702/150	1
701/29	728	73/114.61	1
701/30	51	701/32.4	1
701/33	225	701/33.2	5
701/201	212	701/409	1
701/213	614	701/410	11
701/210	181	701/413	4
701/207	525	701/417	1
701/201	212	701/418	1
701/211	366	701/428	42
701/207	525	701/438	2
701/211	366	701/454	8
701/219	18	701/454	1
701/216	39	701/466	1
701/213	614	701/473	1
701/211	366	701/517	2
701/209	531	701/517	3
701/29	728	701/29.6	34
701/34	109	701/29.8	5
701/209	531	701/410	58
701/207	525	701/421	1
701/209	531	701/424	16
701/204	34	701/424	2
701/209	531	701/432	1
701/200	509	701/442	1
701/208	526	701/486	1
701/200	509	701/491	2
701/217	55	701/492	1
701/207	525	701/493	2
701/213	614	701/521	1
701/208	526	701/533	12
701/200	509	701/538	32
701/211	366	701/539	5
701/35	314	701/29.7	2
701/30	51	701/31.5	1

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/33	225	701/31.8	4
701/35	314	701/33.6	7
701/32	23	701/34.2	1
701/219	18	701/409	1
701/207	525	701/426	3
701/206	58	701/436	1
701/208	526	701/461	20
		701/462	4
701/219	18	701/466	1
701/209	531	701/468	1
701/201	212	701/468	5
701/213	614	701/478.5	3
701/200	509	701/488	1
701/207	525	701/489	1
701/224	51	701/492	1
701/201	212	701/521	2
701/29	728	701/31.3	1
701/31	39	701/31.7	2
701/34	109	701/33.7	1
701/217	55	701/409	1
701/209	531	701/426	24
701/211	366	701/440	5
701/214	114	701/445	1
701/213	614	701/446	7
		701/455	5
701/211	366	701/456	1
701/223	34	701/466	3
701/200	509	701/467	6
701/214	114	701/476	5
701/215	53	701/482	2
701/217	55	701/494	12
		701/498	1
701/210	181	701/510	1
701/208	526	701/520	1
701/215	53	701/541	1
701/33	225	701/29.3	18
701/35	314	701/31.8	1
701/29	728	701/33.7	24
701/208	526	701/410	19
701/207	525	701/414	2
701/200	509	701/416	2
701/207	525	701/446	22
701/209	531	701/450	2

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/216	39	701/457	1
701/200	509	701/463	1
701/208	526	701/484	2
701/200	509	701/515	1
701/201	212	701/516	4
701/205	30	701/532	1
701/31	39	701/31.4	3
701/33	225	701/33.9	1
701/211	366	701/416	2
701/212	53	701/426	2
701/207	525	701/434	2
701/213	614	701/444	1
701/224	51	701/466	2
		701/468	1
701/213	614	701/485	9
701/220	161	701/508	5
701/223	34	701/534	1
701/29	728	701/30.7	2
701/33	225	701/33.1	2
701/225	11	701/400	1
701/208	526	701/400	4
701/216	39	701/410	2
701/210	181	701/412	8
701/206	58	701/440	1
701/201	212	701/443	2
701/213	614	701/479	8
701/200	509	701/517	12
		701/537	11
701/209	531	701/538	1
701/29	728	701/32.4	6
701/34	109	701/33.9	2
701/213	614	701/34.4	1
701/207	525	701/420	7
701/214	114	701/457	1
701/213	614	701/476	3
		701/482	15
		701/491	9
701/200	509	701/516	19
701/431	1	701/431	1
701/33	225	701/31.4	2
701/204	34	701/533	1
701/33	225	701/36	11
701/200	509	708/167	1

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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/209	531	701/25	4
701/200	509	340/995.1	1
701/225	11	348/140	1
701/215	53	701/23	1
701/29	728	701/70	2
701/30	51	701/93	1
701/34	109	701/13	1
701/35	314	702/183	1
701/29	728	702/185	3
701/33	225	701/99	2
701/200	509	327/238	1
701/223	34	342/153	1
701/224	51	704/224	1
701/35	314	73/167	1
701/34	109	701/50	1
701/29	728	701/29.5	4
701/34	109	701/30.9	4
701/29	728	701/32.6	4
701/208	526	701/419	2
701/201	212	701/429	1
701/213	614	701/454	31
701/216	39	701/454	2
701/215	53	701/454	1
701/209	531	701/457	3
701/201	212	701/465	16
701/35	314	701/467	2
701/214	114	701/468	2
701/200	509	701/480	1
701/217	55	701/496	1
701/213	614	701/501	1
701/221	39	701/508	1
701/217	55	701/513	1
701/214	114	701/514	1
701/209	531	701/523	2
701/35	314	701/29.6	29
701/34	109	701/30.6	6
		701/32.8	1
701/31	39	701/33.6	1
701/213	614	701/411	2
701/210	181	701/421	2
701/201	212	701/423	13
701/209	531	701/427	3
701/200	509	701/428	7

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/202	192	701/434	2
701/204	34	701/468	1
701/207	525	701/488	1
701/213	614	701/512	1
		701/517	6
701/207	525	701/521	11
701/216	39	701/523	1
701/200	509	701/535	1
701/213	614	701/537	1
701/208	526	701/541	1
701/200	509	701/32.6	1
701/211	366	701/33.4	1
701/29	728	701/34.3	6
701/208	526	701/34.4	1
701/209	531	701/409	3
701/211	366	701/423	3
701/200	509	701/426	12
701/210	181	701/431	1
701/208	526	701/445	7
701/202	192	701/457	1
701/220	161	701/466	1
701/207	525	701/468	25
701/200	509	701/470	1
701/215	53	701/472	2
701/207	525	701/475	1
701/200	509	701/500	1
701/201	212	701/527	11
701/30	51	701/29.5	13
701/206	58	701/416	1
701/200	509	701/420	14
701/213	614	701/424	1
701/207	525	701/431	5
701/217	55	701/446	5
701/200	509	701/466	1
701/218	15	701/466	1
701/201	212	701/482	2
701/211	366	701/487	1
701/205	30	701/495	1
701/224	51	701/495	2
701/221	39	701/505	1
701/200	509	701/509	1
701/221	39	701/511	1
701/211	366	701/523	3



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## PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/29	728	701/29.1	37
701/30	51	701/33.8	1
701/207	525	701/408	44
701/202	192	701/420	17
701/211	366	701/420	10
701/208	526	701/431	39
701/200	509	701/434	1
701/207	525	701/449	3
701/213	614	701/471	7
701/35	314	701/473	1
701/200	509	701/478.5	1
701/213	614	701/488	3
701/220	161	701/493	1
		701/503	3
701/208	526	701/507	1
701/220	161	701/510	10
701/207	525	701/520	5
701/30	51	701/34.1	1
701/210	181	701/411	17
701/213	614	701/412	8
		701/420	3
701/206	58	701/434	1
701/210	181	701/454	2
701/222	36	701/468	1
701/209	531	701/507	1
701/220	161	701/512	4
701/208	526	701/519	2
701/201	212	701/532	3
701/202	192	701/538	2
701/34	109	701/30.3	10
701/205	30	701/408	1
701/201	212	701/417	2
701/200	509	701/423	5
701/209	531	701/438	6
701/200	509	701/454	14
701/219	18	701/461	1
701/200	509	701/469	6
701/214	114	701/470	19
701/213	614	701/484	51
		701/487	30
701/224	51	701/494	1
701/207	525	701/494	4
701/208	526	701/500	1

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PROJECT EA701

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
701/207	525	701/504	2
701/29	728	701/29.2	36
701/31	39	701/29.2	1
701/34	109	701/29.6	1
		701/30.5	4
701/31	39	701/32.2	1
701/35	314	701/33.1	1
701/29	728	701/33.4	43
701/33	225	701/33.5	1
701/202	192	701/400	2
701/208	526	701/409	42
701/202	192	701/414	4
701/211	366	701/419	1
701/205	30	701/466	15
701/216	39	701/470	1
701/29	728	701/472	1
701/217	55	701/499	2
701/207	525	701/500	7
		701/503	1
701/200	509	701/518	1
701/210	181	701/523	1
701/207	525	701/526	3
701/225	11	701/532	1
701/533	1	701/533	1
701/207	525	382/181	1
701/214	114	701/50	2
701/200	509	701/93	2
701/216	39	701/2	1
701/29	728	701/22	1
701/208	526	340/995.15	2
701/35	314	701/49	1
701/29	728	701/102	1
701/205	30	701/93	1
701/207	525	701/23	10
701/29	728	701/23	2
701/214	114	708/203	1
701/223	34	701/23	2
701/205	30	701/37	1
701/213	614	359/843	1

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PROJECT E-A701

C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

<u>Class</u>	<u>USPC</u>	<u>Subclass</u>	<u>Subclass</u>	<u>IPC</u>	<u>Notation</u>
701		29.1-34.4	G01M		17/00
			G06F		7/00
			G06F		19/00
			G06F		11/30
			G07C		5/00
		29.5	G01N		33/30
		32.4	G01S		1/00
			G01S		5/02
		400-541	G01C		21/00
		409-464	G08G		1/123
		410-444	G01C		21/34
		446-448	G01C		21/30
		468-491	G01S		1/00
			G01S		5/02
		481	G06N		
		492	G01S		1/00
		493	G01S		1/24
		494-499	G01C		21/12
		500-512	G01C		21/10
		513	G01C		21/02
		514	G01S		13/88
		530	G01C		17/38
		531	G01C		21/24
		532-533	G08G		1/123
		533	G01C		21/34
		36-49	G06F		7/00

CLASS 73 - MEASURING AND TESTING

Definitions Modified:

Subclass 178: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541, for calculations for use in navigation.

## CLASS 244 - AERONAUTICS AND ASTRONAUTICS

Definitions Modified:

Subclass 3.1: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 3+ for computer systems for vehicle control or vehicle condition indication and subclasses 400-541 for computations in the application of navigation.

Subclass 3.15: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 3+ for computing systems for vehicle control or vehicle condition indication and subclasses 400-541 for computations in the application of navigation.

Subclass 3.2: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 500-512 for navigational applications which include an inertial sensor.

Subclass 75.1: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 3 through 18 for computing systems for vehicle control or vehicle condition indication and subclass 400-541 for computations in the application of navigation.

Subclass 76: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 3+ for computing systems for vehicle control or vehicle condition indication and subclasses 400-541 for computations in the application of navigation.

Subclass 158.1: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 531, for mathematical computations of space craft orbits or paths. If significant vehicle structure is recited, classification is in the appropriate vehicle class.

## CLASS 340 – COMMUNICATIONS: ELECTRICAL

Definitions Modified:

Subclass 426.19: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 468-491 for navigation having significant data processing which uses GPS.

Subclass 539.13: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 468-491 for navigation using GPS and subclass 517 for the transmission of location information to a remote site.

Subclass 539.2: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 409-464 for navigation position determining equipment for use in a map database system.

Subclass 995.1: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 409-464 for navigation having significant data processing and which may include a map display.

Subclass 995.15: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 455 for navigation data processing including variable map scale.

Subclass 995.23: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 455 for navigation data processing including variable map scale.

Subclass 995.25: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 411-419 for navigation with significant data processing including route correction.



CLASS 342 – COMMUNICATIONS: DIRECTIVE RADIO WAVE SYSTEMS AND DEVICES  
(E.G., RADAR, RADIO NAVIGATION)

Definitions Modified:

Class Definition: Under SECTION II - REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 and 300+ for computer applications in the area of navigation and determining the relative location between two points.

Subclass 29: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 17 for computerized radar for vehicle indication or guidance; subclass 514 for computerized radar ground scanners; and subclass 301 for computer avoidance collision systems.

Subclass 47: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for computer navigation systems and particularly subclass 492 for computer navigation systems utilizing VOR/DME equipment.

Subclass 49: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 492 for computer navigation systems utilizing TACAN equipment.

Subclass 350: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for computer navigation systems using electrical computers or data processors.

Subclass 388: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 493 for computerized navigation apparatus using Loran equipment.

Subclass 397: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 493 for computerized navigation apparatus using Decca equipment.

Subclass 399: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 492 for computer navigation apparatus using TACAN equipment.

## CLASS 343 – COMMUNICATIONS: RADIO WAVE ANTENNAS

Definitions Modified:

Class Definition: Under SECTION III- REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for the application of a computer in the area of navigation, particularly subclasses 408-526 for position determining equipment, and subclasses 300+ for determining the relative location between two points. (See Lines With Other Classes, "Measuring and Testing," above.)

CLASS 348 – TELEVISION

Definitions Modified:

Subclass 113: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for navigation using computer systems.

## CLASS 368 - HOROLOGY: TIME MEASURING SYSTEMS OR DEVICES

Definitions Modified:

Class Definition: Under SECTION III-REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass 465 for systems or devices which perform computations involving time or nontime parameters with an output time signal or indication (e.g., average wait time, estimated time of arrival, etc.). (See Lines With Other Classes and Within This Class, "Combinations of Other Apparatus").

CLASS 375 - PULSE OR DIGITAL COMMUNICATIONS

Definitions Modified:

Subclass 130: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation and Relative Location, subclasses 400-541 for subject matter relating to navigation systems using spread-spectrum signaling.

CLASS 380 – CRYPTOGRAPHY

Definitions Modified:

Subclass 258: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 408-526 for navigation employing position determining equipment.

## CLASS 434 - EDUCATION AND DEMONSTRATION

Definitions Modified:

Subclass 1: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for data processing navigation, particularly subclasses 408-526 for equipment which determines position.

Subclass 111: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for electrical data processing navigation equipment, particularly subclass 513 for such equipment using a star tracker.

Subclass 239: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 400-541 for electrical data processing navigation equipment.



CLASS 701 – DATA PROCESSING: VEHICLES, NAVIGATION, AND RELATIVE LOCATION

Definitions Abolished:

Subclasses:

29-35, and 200-226

Definitions Modified:

Class Definition: Under SECTION III- SUBCLASS REFERENCES TO THE CURRENT CLASS, SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 200, through 226, for navigation.

Insert:

400-541, for navigation.

Subclass 1: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 200+.

Insert:

400-541, for navigational systems, per se.

Subclass 13: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 226

Insert:

531, for the navigation of a vehicle within a space orbit or path.

Subclass 23: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 200+.

Insert:

400-541, for a navigational system.

Subclass 25: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 202

Insert:

410-430, for route searching or determining in a map database system utilizing location determining.

533, for route searching or determining in a map database system, in general.

Definitions Established:**29.1 Vehicle diagnosis or maintenance determination:**

This subclass is indented under subclass 1. Subject matter wherein the electrical data processing system or calculating computer is designed to evaluate, monitor, or indicate the performance, operating condition or servicing need of a vehicle.

(1) Note. Error or fault handling in navigational systems is classified elsewhere.

SEE OR SEARCH THIS CLASS, SUBCLASS:

400-541, for error or fault handling in navigational systems.

SEE OR SEARCH CLASS:

702, Data Processing: Measuring, Calibrating, or Testing, subclasses 183-185 for data processing diagnostic analysis, in general.

**29.2 Failure detection initiates subsequent vehicle control:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer produces a subsequent change in vehicle operation following a failure occurrence.

**29.3 For multiple vehicles (e.g., fleet, etc.):**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer analyzes a group of plural vehicles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

482, for plural object locating using a satellite positioning system.

**29.4 Indication of maintenance interval:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer determines a need for vehicle servicing based on a constraint parameter (e.g., time, operating condition or vehicle mileage).

**29.5 Caused by oil condition degradation:**

This subclass is indented under subclass 29.4. Subject matter wherein the constraint parameter is the state of vehicle lubricating fluid.

**29.6 Vehicle or device identification:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer generates a signal identifying the vehicle (e.g., make, model, year of manufacture, etc.) or vehicle component to be diagnosed.

(1) Note. Included herein is vehicle or device identification using RFID (radio frequency identification).

**29.7 Detection of faulty sensor:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer functions to identify a malfunction of a vehicle sensing device.

**29.8 By applying signal to test sensor:**

This subclass is indented under subclass 29.7. Subject matter wherein an artificially produced stimulus is applied to determine sensor condition.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.8, for active system testing by applying a stimulation thereto.

**29.9 Fault prediction:**

This subclass is indented under subclass 29.7. Subject matter wherein a forecast of future sensor failure is produced.

**30.1 Inhibiting fault indication:**

This subclass is indented under subclass 29.7. Subject matter wherein a preliminary showing of a failure is suppressed from further processing or display.

**30.2 Using mathematical model:**

This subclass is indented under subclass 29.7. Subject matter wherein a theoretical numeric representation of a system or element is used in the identification of the malfunctioning vehicle sensor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.9, for a mathematical model used in vehicle diagnosis or maintenance determination generally.

SEE OR SEARCH CLASS:

703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, subclass 2 for modeling by mathematical expression, in general.

**30.3 Plausibility, verification or confirmation of sensor output:**

This subclass is indented under subclass 29.7. Subject matter wherein the output of the sensor is checked for reasonableness, substantiation, or authentication.

SEE OR SEARCH THIS CLASS, SUBCLASS:

31.7, for determination of the confirmation of a system fault.

**30.4 Utilizing time related property of sensor output (e.g., period or frequency, etc.):**

This subclass is indented under subclass 29.7. Subject matter wherein some time-based characteristic of the sensor output (such as period or frequency) is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.6, for diagnosis or maintenance determination using a time related property.

**30.5 By specific comparison with sensor output:**

This subclass is indented under subclass 29.7. Subject matter wherein a match operation is performed with the actual sensor output.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.7, for signal comparison in vehicle diagnosis and maintenance determination.

- 30.6 Mutual comparison of plural identical sensors:**  
This subclass is indented under subclass 30.5. Subject matter wherein the outputs of multiple sensors of the same type are matched.
- 30.7 Comparison of sensor with output of different type sensor:**  
This subclass is indented under subclass 30.5. Subject matter wherein the output of a sensor is matched with that of a diverse variety of sensor.
- 30.8 Comparing current sensor output with previously stored value thereof:**  
This subclass is indented under subclass 30.5. Subject matter wherein the output of a sensor is matched with past samples of the same sensor.
- 30.9 Sensor output compared to range of values:**  
This subclass is indented under subclass 30.5. Subject matter wherein the output of a sensor is matched to a respective band of values.
- 31.1 Sensor output compared to threshold:**  
This subclass is indented under subclass 30.5. Subject matter wherein the output of a sensor is compared to a discrete value.
- 31.2 Variable or dynamic:**  
This subclass is indented under subclass 31.1. Subject matter wherein the discrete value can change periodically or continually.
- 31.3 Including event counter:**  
This subclass is indented under subclass 29.7. Subject matter wherein an element which enumerates occurrences is utilized.
- 31.4 Diagnosis or maintenance need determined externally to vehicle:**  
This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer produces the diagnosis or maintenance need determination at a location remote from the vehicle.
- 31.5 Having particular communication link (e.g., Internet, satellite, etc.) with external site:**  
This subclass is indented under subclass 31.4. Subject matter wherein a specified communication system or method conveys diagnostic or maintenance information between a vehicle and a remote site which produces the diagnosis or maintenance need determination.
- (1) Note. For classification herein, the communications link must be broadly recited. Detailed communication systems are classified elsewhere.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
484-485, for a satellite positioning system having a communication link to an external ground site.
- 31.6 Determining repair needed to correct fault:**  
This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer can establish the specific corrective action which is needed to eliminate the fault condition.
- 31.7 Validation or confirmation of fault:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer checks a detected failure for reasonableness or authentication.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30.3, for confirming the output of a diagnostic sensor.

**31.8 Determining likely cause of fault:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer provides a most probable cause of an observed failure.

**31.9 Failure prediction:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer produces a forecast of future vehicle fault.

**32.1 Trend analysis:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer determines a generally linear movement with time of a diagnostic or maintenance need variable.

**32.2 Data recording following vehicle collision:**

This subclass is indented under subclass 29.1. Subject matter wherein diagnostic or maintenance data processing system or calculating computer stores specific vehicle data for future analysis in the event of a vehicle making unintentional contact with another object.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.4, for storing operational history in a vehicle diagnostic system.

430, for particular data storage or retrieval in route searching or determining.

461-464, for map data storage or retrieval in a map database system.

540, for data storage or retrieval in a navigation system in general.

**32.3 Including vehicle location determination:**

This subclass is indented under subclass 29.1. Subject matter wherein diagnostic or maintenance data processing system or calculating computer obtains and utilizes data providing vehicular position in space.

SEE OR SEARCH THIS CLASS, SUBCLASS:

408-526, for navigation employing position determining.

**32.4 By satellite positioning system (e.g., GPS, etc.):**

This subclass is indented under subclass 32.3. Subject matter wherein vehicular location is determined by communication with satellites dedicated to a world wide navigation tracking system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

468-491, for navigation using a satellite positioning system in general.

- 412, for route correction in a route searching system including a satellite positioning system.

SEE OR SEARCH CLASS:

- 342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), subclass 357.21 – 357.78 for sending or receiving radio wave energy which is characterized by some quality that varies according to the relative direction or position of a satellite used to locate the position of an object and 450 – 465 for an apparatus for determining the position in space of an object, vehicle, or atmospheric condition by the reception of signals not having distinctive bearing or position determinative characteristics .

**32.5 Including vehicle distance travelled determination:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer calculates the total path length traversed by a vehicle during a period of interest.

**32.6 Including data security (e.g., encryption, password, etc.):**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer provides some measure to protect the access to or ability to modify data used therein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 486, for a satellite positioning system including security processing.

SEE OR SEARCH CLASS:

- 726, Information Security, appropriate subclasses for information security, in general.
- 380, Cryptography, subclass 258 for communication system position dependent or authenticating.

**32.7 Having internal vehicle network to distribute diagnosis or maintenance data therein**

This subclass is indented under subclass 29.1. Subject matter wherein a local network (e.g., a Vehicle Area Network) within a vehicle facilitates the relay of diagnosis or maintenance data therein.

**32.8 Active testing (i.e., providing input to system):**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer applies an artificially produced stimulus to the system to facilitate diagnosis or maintenance need determination.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 29.8, for applying a signal to test a sensor.

**32.9 Using mathematical model:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer uses a theoretical numeric representation of a system or element to determine the diagnosis or maintenance need.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30.2, for a mathematical model used in detection of a faulty diagnostic sensor.

SEE OR SEARCH CLASS:

703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, subclass 2, for modeling by mathematical expression, in general .

**33.1 Calibration:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer compares a system or component to a standard and determining the deviation from the standard so as to ascertain the proper correction factors .

**33.2 Including portable or handheld element (e.g., linked to an On Board Diagnostic system, etc.):**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer incorporates an element which is readily moved between locations by a user or which can be readily held by a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

491, for a portable satellite positioning system.

**33.3 Having removable data recording device:**

This subclass is indented under subclass 33.2. Subject matter wherein the portable or handheld element is one in which desired data has been stored and which is readily extractable.

**33.4 Storing operational history (e.g., data logging, etc.):**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer records information regarding past diagnostic or maintenance data.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.2, for data recording following a collision.

430, for particular data storage or retrieval in route searching or determining.

461-464, for map data storage or retrieval in a map database system.

540, for data storage or retrieval in a navigation system in general.

SEE OR SEARCH CLASS:

702, Data Processing, Measuring, Calibrating, or Testing, subclass 187 for measurement history logging, in general.

**33.5 Pass, fail or inconclusive status:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer produces either an acceptable, unacceptable or indeterminate indication.

**33.6 Utilizing time related property of fault signal (e.g., duration, etc.):**



This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer uses a time related characteristic of an error signal.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30.4, for sensor diagnosis using a time related property of sensor output.

**33.7 Including signal comparison:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer performs a matching operation with a particular system signal.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30.5-31.2, for detecting faulty sensor by comparison.

**33.8 To range of values:**

This subclass is indented under subclass 33.7. Subject matter wherein the particular signal is matched to a respective band of values.

**33.9 To threshold:**

This subclass is indented under subclass 33.7. Subject matter wherein the particular signal is matched to a discrete value.

**34.1 Variable or dynamic:**

This subclass is indented under subclass 33.9. Subject matter wherein the discrete value can change periodically or continually.

**34.2 Customized for particular vehicle type or model:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer can be adapted to a particular variety of vehicle.

**34.3 Having plural diagnostic processors:**

This subclass is indented under subclass 29.1. Subject matter wherein the diagnostic or maintenance data processing system or calculating computer includes at least two circuits which are dedicated to determining diagnosis or maintenance need.

**34.4 Diagnosis or maintenance of specific vehicle subsystem:**

This subclass is indented under subclass 29.1. Subject matter wherein a particular element of a vehicular system is analyzed by the diagnostic or maintenance data processing system or calculating computer.

**400 NAVIGATION:**

This subclass is indented under the class definition. Subject matter wherein the electrical data processing system or calculating computer functions to determine a course, position, or distance traveled.

(1) Note. In Class 116, Signals and Indicators, Digest 43, there exists an unofficial collection of art relating to navigation devices.

- (2) Note. Navigation systems using spread spectrum signaling are included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 300-302, for an electrical data processing system or a calculating computer to determine the relative location between two points.

SEE OR SEARCH CLASS:

- 33, Geometrical Instruments, appropriate subclasses and particularly subclasses 268 - 271 for a celestial navigational instrument.
- 73, Measuring and Testing, subclasses 178 - 187 for navigation instruments.
- 244, Aeronautics and Astronautics, subclass 3.18 for optical celestial navigation in missile control.
- 318, Electricity: Motive Power Systems, subclass 582 for a vehicular guidance system with celestial navigation.
- 340, Communications: Electrical, subclasses 988 - 996 for vehicle position indication.
- 342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), subclasses 1 - 205 for radar navigation systems; and subclasses 350 - 465 for directive object location determining devices and processes for sending or receiving radio wave energy which is characterized by some quality that varies according to the relative direction or position of the sender or receiver.
- 348, Television, subclasses 113-120 for a picture signal generator or reproducer which is used with a steerable vehicle to permit control of the vehicle from a remote location or to provide an indication in the vehicle of its position as an aid in the guidance of the vehicle.
- 353, Optics: Image Projectors, subclasses 11 - 12 for a projector especially adapted to project an image of a map or navigation chart, an image of a target onto a map or chart, or a target which represents a vehicle such as an aircraft onto a screen.
- 356, Optics: Measuring and Testing, subclasses 3 - 22 for optical range finders and subclasses 27 - 28.5 for velocity or height measuring.
- 375, Pulse or Digital Communications, subclass 130 for spread spectrum.
- 434, Education and Demonstration, subclasses 1- 10 for training in the use of radar or sonar detecting or range finding, subclasses 30 - 59 for aircraft training, per se, and subclasses 111, 186, and 239 - 244 for subject matter relating to training or instruction in the area of navigation.
- 455, Telecommunications, subclasses 456.1 - 457 for location monitoring in a zoned or cellular telephone system having significant communication details.

**408 Employing position determining equipment:**

This subclass is indented under subclass 400. Subject matter wherein the electrical data processing system or calculating computer functions to compute, establish, or indicate location based on the information provided by a position determining device.

SEE OR SEARCH CLASS:

- 380, Cryptography, subclass 258 for position dependent or authenticating communication system.
- 434, Education and Demonstration, subclass 1 for detection or range determination of distant object by apparatus using sensor of electromagnetic or sound energy.

**409 For use in a map database system:**

This subclass is indented under subclass 408. Subject matter wherein position information is utilized in conjunction with a map information processing data system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

532-533, for navigation using a map database, in general.

SEE OR SEARCH CLASS:

- 340, Communications: Electrical, subclass 539.2 for condition responsive indicating system with particular radio coupling link including central station detail map, and subclass 990 and subclasses 995.1-995.28 for vehicle position indication with a map display.

**410 Including route searching or determining:**

This subclass is indented under subclass 409. Subject matter further capable of processing stored electrical data corresponding to locations within a given geographical area to determine a path of travel between a point of origin and a destination point.

SEE OR SEARCH THIS CLASS, SUBCLASS:

533, for route searching or determining in a map database system, in general.

**411 Route correction, modification or verification:**

This subclass is indented under subclass 410. Subject matter wherein the electrical data processing system or calculating computer is designed to either, (a) alter the path of travel, or determine a supplemental path of travel, (b) provide instructions to resume to the original path of travel, or (c) validate position or course.

**412 Including satellite positioning system (e.g., GPS, etc.):**

This subclass is indented under subclass 411. Subject matter wherein the route correction, modification, or verification utilizes positional data via communication with satellites dedicated to a world wide navigational tracking system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.4, for vehicle location by GPS in a vehicle diagnostic or maintenance need determination.

468-491, for navigation using a satellite positioning system in general.

SEE OR SEARCH CLASS:

- 342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), subclasses 357.21 – 357.78 for sending or receiving radio wave energy which is characterized by some quality that varies according to the relative direction or position of a satellite used to locate the position of an object and 450 – 465 for an apparatus for determining the position in space of an object, vehicle, or atmospheric condition by the reception of signals not having distinctive bearing or position determinative characteristics.

**413 Cancellation of newly corrected or modified route:**  
This subclass is indented under subclass 411. Subject matter wherein a recently corrected or changed route is removed.

**414 Based on traffic condition (e.g., congestion, etc.):**  
This subclass is indented under subclass 411. Subject matter wherein a factor related to the state of vehicles around a given vehicle in a particular area is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

423, for route searching or determining in general based on traffic or weather.

**415 Based on weather condition:**  
This subclass is indented under subclass 411. Subject matter wherein a meteorological factor is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

423, for route searching or determining based on traffic or weather.

**416 Regenerating entirely new route from current position:**  
This subclass is indented under subclass 411. Subject matter wherein a complete, different route from a current location to a destination is determined.

(1) Note. This would exclude a case where the system merely determines a correction path back to a previously determined route.

**417 Having particular off-route detection:**  
This subclass is indented under subclass 411. Subject matter wherein a detail of determining a condition of no longer following a determined route is provided.

**418 User interface:**  
This subclass is indented under subclass 411. Subject matter wherein an intermediate device is provided which allows communication between an individual and a route correction, modification or verification system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

487-488, for a user interface in a GPS system.

**419 Audio:**  
This subclass is indented under subclass 418. Subject matter wherein the interface involves sound.

(1) Note. Included herein are speech synthesis and speech recognition.

SEE OR SEARCH THIS CLASS, SUBCLASS:

428-429, for audio or visual route guidance.

431-444, for audio or visual route guidance in a map database system.

488, for a speech recognition or synthesis user interface in a satellite positioning system.

- 420 Remote route searching or determining:**  
This subclass is indented under subclass 410. Subject matter wherein route searching or determining takes place at a location distant from a user.
- 421 Route information sent to user in successive portions:**  
This subclass is indented under subclass 420. Subject matter wherein remotely determined route information is transmitted to the user one segment at a time.
- 422 For plural moving bodies:**  
This subclass is indented under subclass 410. Subject matter wherein route searching or determining is performed for multiple objects in motion.
- 423 Based on real time condition (e.g., traffic, weather, etc.):**  
This subclass is indented under subclass 410. Subject matter wherein the current state of the environment in the vicinity of a user is used in route searching or determining.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 414, for route correction based on traffic.  
415, for route correction based on weather condition.

- 424 Based on user driving history:**  
This subclass is indented under subclass 410. Subject matter wherein stored data related to previous driver habit or performance is utilized.
- 425 Based on user input preference:**  
This subclass is indented under subclass 410. Subject matter wherein specific user choices are included in the route searching or determining.
- 426 Point of interest (POI) or landmark:**  
This subclass is indented under subclass 425. Subject matter wherein specific objects or locations that a user would like to visit are input.
- 427 Using speech recognition:**  
This subclass is indented under subclass 425. Subject matter wherein words spoken by a user are understood by a route searching or determining system.
- 428 Having audio or visual route guidance:**  
This subclass is indented under subclass 410. Subject matter further comprising audio or visual information providing directional instructions in map database route searching.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 419, for an audio interface used in route correction, modification or verification.  
431-444, for audio or visual route guidance in a map database system .  
488, for a speech recognition synthesis user interface in a satellite positioning system.

- 429 Using color to differentiate route portion:**  
This subclass is indented under subclass 428. Subject matter wherein a particular hue is used to designate a particular segment of a route.
- 430 Having particular storage or retrieval of data:**  
This subclass is indented under subclass 410. Subject matter wherein specific manipulation of information to or from a holding device is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.2, for data recording following a collision.

33.4, for storing operational history in a vehicle diagnostic system.

461-464, for map data storage or retrieval in a map database system.

540, for data storage or retrieval in a navigation system, in general.

**431 Having audio or visual route guidance:**

This subclass is indented under subclass 409. Subject matter further comprising use of hearing or eyesight information providing directional instructions to follow a chosen path.

SEE OR SEARCH THIS CLASS, SUBCLASS:

419, for an audio interface in map database route searching correction or modification.

488, for a speech recognition or synthesis user interface in a satellite positioning system.

454-460, for particular presentation of location data as well as map database data.

**432 Plural mode display:**

This subclass is indented under subclass 431. Subject matter wherein selection among multiple presentation scenarios is performed.

(1) Note. An example of multiple modes would be the presentation or suppression of topographic details in a given view.

**433 Pedestrian guidance:**

This subclass is indented under subclass 431. Subject matter wherein assistance is provided to an individual walking to a destination.

**434 Within building:**

This subclass is indented under subclass 433. Subject matter wherein navigational guidance is provided to an individual seeking a particular destination in a self-contained structure.

(1) Note. Included herein is navigation within an apartment building, hospital, or shopping mall.

**435 Prohibitive indication (e.g., do not enter, etc.):**

This subclass is indented under subclass 431. Subject matter wherein a message is provided to a user to inhibit them from performing some navigational action.

**436 Visual guidance having enhanced realism (e.g., 3 dimensional, etc.):**

This subclass is indented under subclass 431. Subject matter wherein the visual guidance is more lifelike than a traditional 2-dimensional view.

**437 Detailed route intersection guidance:**

This subclass is indented under subclass 431. Subject matter wherein particular guidance at a location where two or more roads meet is provided.

**438 Including point of interest (POI) or landmark:**  
This subclass is indented under subclass 431. Subject matter which includes a representation of a fixed location facility potentially attractive to a traveler or which is historically or geographically significant.

**439 Providing supplemental information (e.g., environmental condition, etc.):**  
This subclass is indented under subclass 431. Subject matter wherein audio or visual output unrelated to route guidance is provided in addition to that necessary to guide a user along a particular route.

SEE OR SEARCH THIS CLASS, SUBCLASS:

441, for unspoken audio route guidance.

**440 Guidance by text:**  
This subclass is indented under subclass 431. Subject matter wherein the visual route guidance is written.

**441 Audio guidance other than speech:**  
This subclass is indented under subclass 431. Subject matter wherein sounds for route guidance is provided.

(1) Note. Included here, for example, are sounds which appear to move in one direction or another inside a vehicle which provide directional guidance.

SEE OR SEARCH THIS CLASS, SUBCLASS:

439, for supplemental audio unrelated to route guidance.

**442 Providing indication of off-route condition:**  
This subclass is indented under subclass 431. Subject matter wherein an audio or visual signal conveys a condition of not following a desired path.

**443 Using speech recognition or synthesis:**  
This subclass is indented under subclass 431. Subject matter wherein vocal language is artificially understood or generated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

427, for speech recognition in a location based route searching or determining.

488, for speech recognition or synthesis in a GPS system.

539, for speech recognition or synthesis in a navigational system generally.

**444 Having particular mounting of guidance device to vehicle:**  
This subclass is indented under subclass 431. Subject matter wherein detail of a structure attaching a vehicle guidance device thereto is provided.

**445 Having location correction:**  
This subclass is indented under subclass 409. Subject matter wherein an initial position determination is made more accurate.

**446 By map matching:**

This subclass is indented under subclass 445. Subject matter wherein an initial position determination is adjusted to coincide with a previously stored geographic region representation.

**447 Of multiple locations:**

This subclass is indented under subclass 446. Subject matter wherein map matching is performed at plural positions along a path.

**448 Using terrain recognition:**

This subclass is indented under subclass 446. Subject matter wherein map matching includes comparing currently observed ground characteristics with previously stored ground characteristics of the same area.

**449 Correcting for terrestrial magnetic field**

This subclass is indented under subclass 445. Subject matter wherein the correction negates the influence of the attraction/repulsion force of the earth on position determination.

**450 Updating existing user map database:**

This subclass is indented under subclass 409. Subject matter wherein an organized collection of personal geographic data is made current.

**451 Data sent to user from remote location:**

This subclass is indented under subclass 450. Subject matter wherein update data is transmitted to a user from a distant position.

**452 Data sent in increments:**

This subclass is indented under subclass 451. Subject matter wherein remote data is sent out in consecutive segments.

**453 Per user request:**

This subclass is indented under subclass 451. Subject matter wherein the remote data is sent out in response to a person specifically asking for such data.

**454 Having particular presentation of location along with data from map database:**

This subclass is indented under subclass 409. Subject matter wherein details of current location in addition to geographic region representation database data are presented to a user.

**455 Having variable map scale:**

This subclass is indented under subclass 454. Subject matter which permits adjustment of the graphical representation of a particular geographic region to an appropriate level of detail.

**456 Inhibiting presentation change:**

This subclass is indented under subclass 454. Subject matter wherein modification of the data presentation is prevented.

**457 Conditionally changed presentation:**

This subclass is indented under subclass 454. Subject matter wherein the display is modified based on a particular state of a user or vehicle.

**458 Bird's eye view:**

This subclass is indented under subclass 454. Subject matter wherein the presentation represents that of an observer elevated above the ground.



**459 Field within field:**

This subclass is indented under subclass 454. Subject matter wherein a relatively small presentation is embedded within a larger presentation.

**460 Vehicle having fixed position within the presentation along with navigational map moving relative thereto:**

This subclass is indented under subclass 454. Subject matter wherein a symbolic vehicle representation is shown in an unchanging position in the presentation while a navigational geographic region representation is moved appropriately past it.

**461 Including map data storage or retrieval:**

This subclass is indented under subclass 409. Subject matter wherein transfer of data to or from a geographic region representation database is specified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.2, for data recording following a collision.

33.4, for storing operational history in a vehicle diagnostic system.

430, for particular data storage or retrieval in route searching or determining.

540, for data storage or retrieval in a navigation system in general.

**462 Selecting from plural storage devices to obtain map data:**

This subclass is indented under subclass 461. Subject matter wherein one of multiple map data storage devices is chosen to supply geographic region representation data.

**463 Using hard drive:**

This subclass is indented under subclass 461. Subject matter wherein data is transferred to or from a device having a permanently mounted inflexible magnetic disk.

SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval , appropriate subclasses for magnetic data storage, in general.

**464 Using cassette tape:**

This subclass is indented under subclass 461. Subject matter wherein data is transferred to or from a device which includes a long narrow flexible spooled strip having a magnetic coating.

SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval, appropriate subclasses, for magnetic data storage, in general.

**465 Determination of estimated time of arrival (ETA) :**

This subclass is indented under subclass 408. Subject matter wherein location determining is utilized to find approximate the hours, minutes, seconds of reaching a destination point.

**466 Determination of along-track or cross-track deviation:**

This subclass is indented under subclass 408. Subject matter wherein the data processing system or calculating computer functions to determine the off track of a present position from a desired position in a direction parallel to or perpendicular to a course.

**467 Including way point navigation:**  
This subclass is indented under subclass 408. Subject matter wherein a position relative to an intermediate point between an origin and a destination is determined.

**468 Using satellite positioning system (e.g., Global Positioning System (GPS), etc.):**  
This subclass is indented under subclass 408. Subject matter wherein the electrical data processing system or calculating computer receives positional data via communication with artificial Earth orbiting device dedicated to a world wide navigational tracking system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.4, for vehicle location using GPS in a diagnostic or maintenance system.

SEE OR SEARCH CLASS:

340, Communications: Electrical, subclass 426.19 for land vehicle alarm or indicators of burglary or unauthorized use with a remote alarm using GPS (i.e., location) and subclass 539.13 for condition responsive indicating system with particular radio coupling link including personal, portable device tracking location (e.g., GPS, etc.).

342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), subclass 357.21 – 357.78 for sending or receiving radio wave energy which is characterized by some quality that varies according to the relative direction or position of a satellite used to locate the position of an object and 450 – 465 for an apparatus for determining the position in space of an object, vehicle, or atmospheric condition by the reception of signals not having distinctive bearing or position determinative characteristics.

**469 Having accuracy improvement of position or location**  
This subclass is indented under subclass 468. Subject matter wherein the electrical data processing system or calculating computer utilizes a secondary or supplemental method or structure to more exactly indicate locale.

SEE OR SEARCH THIS CLASS, SUBCLASS:

495-496, for accuracy improvement in a dead-reckoning system.

**470 Having multiple antennas or receivers (e.g., differential GPS, etc.):**  
This subclass is indented under subclass 469. Subject matter having a plurality of devices to collect information from satellites associated with a world wide navigational system.

**471 Including plural widely separated fixed GPS stations (e.g., Wide Area Augmentation System (WAAS), etc.):**  
This subclass is indented under subclass 470. Subject matter wherein multiple unmoving GPS stations distributed over a wide area are utilized.

**472 Having a self-contained position computing mechanism (e.g., dead-reckoning, etc.):**  
This subclass is indented under subclass 469. Subject matter having a secondary system for independently calculating or indicating location for the substitution, modification, or verification of the satellite position data such as determination without the aid of celestial observation of the vehicle positions from the record of the course, distance made, and known drift.

SEE OR SEARCH THIS CLASS, SUBCLASS:

494-499, for a non-inertial dead-reckoning system per se.

500- 512, for an inertial sensing system which may inherently or explicitly perform dead-reckoning.

**473 Correcting multiple diverse errors:**

This subclass is indented under subclass 469. Subject matter wherein plural mistakes of differing type which produce positional or location inaccuracy are compensated.

**474 Anti-jamming:**

This subclass is indented under subclass 469. Subject matter wherein compensation for an intentionally generated interference signal is provided.

SEE OR SEARCH CLASS:

455, Telecommunications, subclasses 296-312 for detailed telecommunication interference (e.g., jamming, etc.) elimination.

**475 Dilution of precision compensating:**

This subclass is indented under subclass 469. Subject matter wherein accuracy is improved by taking into account geometric configuration of positioning satellites.

**476 Isolating data from error producing satellite:**

This subclass is indented under subclass 469. Subject matter wherein information derived from a satellite determined to be defective is blocked from subsequent processing.

**477 Integer ambiguity resolution:**

This subclass is indented under subclass 469. Subject matter wherein inaccuracy resulting from an unknown number of whole carrier wavelengths occurring between positioning satellite and positioning receiver is compensated.

**478 Correcting clock signal error:**

This subclass is indented under subclass 469. Subject matter wherein timer imprecision of a positioning satellite or a positioning receiver is compensated.

**478.5 Multipath distortion reduction:**

This subclass is indented under subclass 469. Subject matter wherein interference resulting from portions of a transmitted signal being received at differing times at a positional receiver due to intervening physical obstacles is compensated.

**479 Using filter:**

This subclass is indented under subclass 469. Subject matter wherein positional or location inaccuracy is reduced by the use of a device which removes or diminishes an undesired signal frequency component.

SEE OR SEARCH THIS CLASS, SUBCLASS:

509-510, for filtering of inputs or outputs of an inertial sensing device in a navigation system employing position-determining equipment.

535-536, for a navigation system providing enhanced navigational accuracy using filtering.

SEE OR SEARCH CLASS:

708, Electrical Computers: Arithmetic Processing and Calculating, subclasses 300-323 for digital filtering, per se.

**480 Kalman:**

This subclass is indented under subclass 479. Subject matter wherein the filtering is provided by a recursive filter which acts on a series of imprecise or noisy data values and which can provide an accurate estimate of the state of the respective linear system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

510, for Kalman filtering of inputs or outputs of an inertial sensing device in a navigation system employing position-determining equipment.

536, for a navigation system providing enhanced navigation accuracy using Kalman filtering in.

**481 Using artificial intelligence (e.g., neural network, etc.):**

This subclass is indented under subclass 469. Subject matter wherein processing elements which are designed to mimic human thought processes are utilized.

SEE OR SEARCH CLASS:

706, Data Processing: Artificial Intelligence, appropriate subclasses for artificial intelligence processing, in general..

**482 Plural object location determination (e.g., fleet, etc.):**

This subclass is indented under subclass 468. Subject matter wherein the position of multiple objects is calculated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

29.3, for multiple vehicle diagnosis or maintenance determination.

**483 Multi-mode (e.g., stand-alone/network assisted, etc.):**

This subclass is indented under subclass 468. Subject matter wherein one of plural operating scenarios for a positioning receiver can be selected such as an independent or separate system aided.

**484 Having communication link to external ground site:**

This subclass is indented under subclass 468. Subject matter wherein a communication path between a positioning receiver and a remote ground location is utilized.

(1) Note. For classification herein, the communications link must be broadly recited. Detailed communication systems are classified elsewhere.

SEE OR SEARCH THIS CLASS, SUBCLASS:

31.5, for a communication link in an externally determined vehicle diagnosis or maintenance need.

**485 Location or position determined at external ground site:**

This subclass is indented under subclass 484. Subject matter wherein specific locale of the positioning receiver is calculated at the remote Earth location.

**486 Having security processing (e.g., password, encryption, etc.):**

This subclass is indented under subclass 468. Subject matter wherein positioning data is protected.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.6, for data security in vehicle diagnosis.

SEE OR SEARCH CLASS:

726, Information Security, appropriate subclasses for information security, in general.

**487 User interface:**

This subclass is indented under subclass 468. Subject matter wherein an intermediate device is provided which allows communication between an individual and a positioning system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

418-419, for a user interface in route correction.

**488 Speech recognition or speech synthesized output**

This subclass is indented under subclass 487. Subject matter wherein the user interface understands conversational sounds spoken by the user or artificially generates conversational sounds providing information to the user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

419, for an audio interface in map database route searching.

427, for speech recognition in a location based route searching or determining.

431-444, for audio or visual route guidance in a map database system.

443, for speech recognition or synthesis in an audio or visual route guidance system.

539, for speech recognition or synthesis in a navigational system generally.

**489 Using vector processing:**

This subclass is indented under subclass 468. Subject matter wherein a data structure representing a magnitude and direction of a quantity is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

512, for vector processing in an inertial sensing system.

**490 Having power conservation:**

This subclass is indented under subclass 468. Subject matter wherein the utilization of a quantity reflecting the magnitude of electrical current multiplied by the magnitude of electrical voltage is minimized

**491 Portable:**

This subclass is indented under subclass 468. Subject matter wherein a positioning receiver is readily hand-held and transportable by a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.2, for a vehicle diagnostic or maintenance need determination having a portable element.

- 526, for a portable position determining device.  
541, for a portable navigational device, in general.

**492 Using VHF omnidirectional radio range/distance measuring equipment (VOR/DME) (e.g., Tacan, etc.):**

This subclass is indented under subclass 408. Subject matter providing aircraft positioning wherein a ground station transmits a station identifier and other data to allow an aircraft to derive a bearing from the station and where the aircraft determines distance to the ground station by sending/receiving a pulse pair thereto.

- (1) Note. Included herein are separate VOR or DME subsystems.

SEE OR SEARCH CLASS:

- 342, Communications: Directive Radio Wave Systems and Devices (e.g., radar, radio navigation) subclass 399 for Tacan.

**493 Using hyperbolic lines of position (e.g., Loran, Decca, etc.):**

This subclass is indented under subclass 408. Subject matter using multiple hyperbola shaped curves to find position wherein each point on a given curve has the same constant time difference between the receipt of signals from two separate transmitters.

SEE OR SEARCH CLASS:

- 342, Communications: Directive Radio Wave Systems and Devices (e.g., radar, radio navigation) subclass 388 for Loran and subclass 397 for Decca.

**494 Using non-inertial dead-reckoning apparatus:**

This subclass is indented under subclass 408. Subject matter wherein position is determined from a last known position along with subsequent displacement without using an inertial detecting device.

- (1) Note. Excluded herein are specifically claimed inertial sensing systems which may inherently or explicitly perform dead-reckoning. A search for dead-reckoning subject matter should include appropriate areas per SEARCH THIS CLASS, SUBCLASS notes below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 472, for a satellite positioning system (e.g., GPS) which includes a self-contained position computing mechanism such as any type of dead-reckoning.  
500-512, for inertial sensing systems which may inherently or explicitly perform dead-reckoning.

**495 Having accuracy improvement of position or location:**

This subclass is indented under subclass 494. Subject matter wherein the electrical data processing system or calculating computer utilizes a secondary or supplemental method or structure to more exactly indicate locale.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 469-481, for accuracy improvement in a satellite positioning system.

- 496 Correction for ellipticity of earth:**  
This subclass is indented under subclass 495. Subject matter wherein an adjustment is made for the fact that the earth is not perfectly spherical (i.e., the polar circumference is smaller than the equatorial circumference).
- 497 Wind speed correction:**  
This subclass is indented under subclass 495. Subject matter wherein an adjustment is made for the impact of the velocity of wind on positional determination.
- 498 Wheel sensor provides distance or heading information:**  
This subclass is indented under subclass 494. Subject matter wherein a detector associated with a vehicle wheel provides data indicative of vehicle distance or direction.
- 499 Including integrator:**  
This subclass is indented under subclass 494. Subject matter wherein a device providing a mathematical operation of finding a function with a known differential is utilized.

## SEE OR SEARCH CLASS:

708, Electrical Computers: Arithmetic Processing and Calculating, subclass 444 for generic digital integration processing.

- 500 Using inertial sensing (e.g., Inertial Navigation System (INS), etc.):**  
This subclass is indented under subclass 408. Subject matter wherein a navigation system utilizes a detector directly responsive to acceleration.

(1) Note. Included herein are inertial sensing systems which may inherently or explicitly perform dead-reckoning.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

472, for a satellite positioning system (e.g., GPS, etc.) which includes a self-contained position computing mechanism such as any type of dead-reckoning.

494-499, for non-inertial dead-reckoning.

## SEE OR SEARCH CLASS:

244, Aeronautics and Astronautics, subclass 3.2 for missile stabilization or trajectory control inertial automatic guidance.

- 501 Having correction by non-inertial sensor:**  
This subclass is indented under subclass 500. Subject matter wherein correction is provided by a detector of other than an inertial property.
- 502 Using four or more accelerometers:**  
This subclass is indented under subclass 500. Subject matter wherein more than three acceleration sensors are utilized.
- 503 Including Doppler effect in inertial sensing signal processing:**  
This subclass is indented under subclass 500. Subject matter wherein the observed frequency shift of an electromagnetic wave due to relative motion between two objects is used.
- 504 Including gravitational effect in inertial sensing signal processing:**

This subclass is indented under subclass 500. Subject matter wherein the attraction between objects based on their mass is used.

- 505 Having error correction of inputs to or outputs from an inertial sensing device:**  
This subclass is indented under subclass 500. Subject matter wherein an inaccurate input to or output from an acceleration detecting device is compensated.
- 506 Plural diverse signals:**  
This subclass is indented under subclass 505. Subject matter wherein multiple different pulse or digital communication types are compensated.
- 507 Velocity:**  
This subclass is indented under subclass 505. Subject matter wherein a signal representative of speed is compensated.
- 508 Azimuth:**  
This subclass is indented under subclass 505. Subject matter wherein correction is made to a signal representing the angle measured clockwise from true north to a point on the horizon directly beneath an elevated object.
- 509 By filtering:**  
This subclass is indented under subclass 505. Subject matter wherein an undesired signal frequency component is removed or diminished.

SEE OR SEARCH THIS CLASS, SUBCLASS:

479-480, for a navigation system employing position-determining equipment using a satellite positioning system and utilizing a filter to reduce positional or location inaccuracy.

535-536, for a navigation system providing enhanced navigational accuracy using filtering.

SEE OR SEARCH CLASS:

708, Electrical Computers: Arithmetic Processing and Calculating, subclasses 300-323 for digital filtering, per se.

- 510 Kalman**  
This subclass is indented under subclass 509. Subject matter wherein the filtering is provided by a recursive filter which acts on a series of imprecise or noisy data values and which can provide an accurate estimate of the state of the respective linear system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

480, for a navigation system employing position-determining equipment using a satellite positioning system and utilizing a Kalman filter to reduce positional or location inaccuracy.

536, for a navigation system providing enhanced navigational accuracy using Kalman filtering.

- 511 Including matrix processing:**  
This subclass is indented under subclass 500. Subject matter wherein data represented by an  $m \times n$  element mathematical structure is manipulated.
- 512 Including vector processing**



This subclass is indented under subclass 500. Subject matter wherein a data structure representing a magnitude and direction of a quantity is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

489, for vector processing in a satellite positioning system.

**513 Using star tracker:**

This subclass is indented under subclass 408. Subject matter further comprising a mechanism to determine the position of the stars.

SEE OR SEARCH CLASS:

250, Radiant Energy, subclasses 203.1-203.7 for a photocell following a star.

434, Education and Demonstration, subclass 111 for celestial navigation.

709, Electrical Computers and Digital Processing Systems: Multicomputer data transferring, FOR 101 for a foreign art collection relating to object detection or tracking.

**514 Including radar or optical ground scanner:**

This subclass is indented under subclass 408. Subject matter further comprising a mechanism to scan the ground by radar or by light.

SEE OR SEARCH CLASS:

342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), subclasses 42-51 for radar transmitter and receiver system.

**515 Emergency use:**

This subclass is indented under subclass 408. Subject matter wherein the position determining is used in a crisis situation requiring an immediate response.

**516 Location dependent distribution of information to a user:**

This subclass is indented under subclass 408. Subject matter wherein data is automatically sent to a person upon reaching the vicinity of a geographic location.

**517 Transmission of location information to remote site:**

This subclass is indented under subclass 408. Subject matter wherein determined location information is conveyed to a point distant from a user.

SEE OR SEARCH CLASS:

340, Communications: Electrical, subclass 539.13 for condition responsive indicating system with particular radio coupling link including personal, portable device tracking location (e.g., GPS, etc.)

**518 Error correction:**

This subclass is indented under subclass 408. Subject matter wherein a modification is made to a determined location to enhance its accuracy.

**519 Object tracking:**

This subclass is indented under subclass 408. Subject matter wherein the location of an object is continuously determined.

**520 Conversion of location coordinates:**

This subclass is indented under subclass 408. Subject matter wherein numbers representing a location in one geometric system are translated into an equivalent representation in a differing geometric system.

**521 Including history log:**

This subclass is indented under subclass 408. Subject matter wherein a record of location data is maintained.

**522 Using computer network (e.g., Internet, etc.):**

This subclass is indented under subclass 408. Subject matter wherein location determination utilizes a system of plural interconnected data processing units.

SEE OR SEARCH THIS CLASS, SUBCLASS:

537, for navigation using a computer network, in general.

SEE OR SEARCH CLASS:

709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses for computer networks, per se.

**523 Using imaging device:**

This subclass is indented under subclass 408. Subject matter wherein location determining utilizes a device which is optically responsive and which produces a representation of a view.

**524 Using neural network:**

This subclass is indented under subclass 408. Subject matter wherein the location determining utilizes elements having weighted outputs which are subsequently summed and which mimic the interconnection of biological neurons.

SEE OR SEARCH CLASS:

706, Data Processing: Artificial Intelligence, subclasses 15-44 for neural networks, in general.

**525 Using magnetometer:**

This subclass is indented under subclass 408. Subject matter location determining uses a detector of a attraction/repulsion force.

SEE OR SEARCH CLASS:

324, Electricity: Measuring and Testing, subclasses 200- 263 for magnetic measuring, per se.

**526 Portable:**

This subclass is indented under subclass 408. Subject matter wherein a location determining device is readily held and movable between locations by a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.2, for a vehicle diagnostic or maintenance need determination having a portable element.

491, for a portable satellite positioning system.

541, for a portable navigational device, in general.

**527 Determination of travel data based on distance measured from a starting point:**  
This subclass is indented under subclass 400. Subject matter wherein the electrical data processing system or calculating computer functions to compute, establish, or indicate travel information associated with a distance measured from an initial position.

**528 Aircraft preflight route search:**  
This subclass is indented under subclass 400. Subject matter wherein a predetermined flight path is established for an aeronautical vehicle prior to take-off.

**529 Great circle route search:**  
This subclass is indented under subclass 400. Subject matter wherein a course is determined along the shortest line between two points on the surface of a sphere.

**530 Including compensated direction finder (e.g., for compass deviation, etc.):**  
This subclass is indented under subclass 400. Subject matter including adjustment for an abnormal condition at a bearing finding device.

(1) Note. This often includes correction for local anomalous magnetic fields.

**531 Space orbit or path**  
This subclass is indented under subclass 400. Subject matter wherein the course, path, or position is outside the atmosphere of a planet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13, for the control of a spacecraft or satellite.

SEE OR SEARCH CLASS:

244, Aeronautics and Astronautics, subclasses 158.1 – 173.3 for spacecraft.

**532 Employing map database system:**  
This subclass is indented under subclass 400. Subject matter wherein a navigation system utilizes a geographic region representation information processing data system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

409-464, for position determining used in a map database system.

**533 Including route searching or determining:**  
This subclass is indented under subclass 532. Subject matter wherein the map database system is further capable of processing stored electrical data corresponding to locations within a given geographical area to determine a path of travel between a point of origin and a destination point.

SEE OR SEARCH THIS CLASS, SUBCLASS:

410-430, for position determining used in map database route searching.

**534 Having error or fault correction:**  
This subclass is indented under subclass 400. Subject matter providing enhanced navigational accuracy.

**535 Using filter:**

This subclass is indented under subclass 534. Subject matter wherein unwanted frequency components of a signal are eliminated or reduced.

SEE OR SEARCH THIS CLASS, SUBCLASS:

479-480, for a navigation system employing position-determining equipment using a satellite positioning system and utilizing a filter to reduce positional or location inaccuracy.

509-510, for filtering of inputs or outputs of an inertial sensing device in a navigation system employing position-determining equipment.

SEE OR SEARCH CLASS:

708, Electrical Computers: Arithmetic Processing and Calculating, subclasses 300-323 for digital filtering, per se.

**536 Kalman:**

This subclass is indented under subclass 535. Subject matter wherein the filtering is provided by a recursive filter which acts on a series of imprecise or noisy data values and which can provide an accurate estimate of the state of the respective linear system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

480, for a navigation system employing position-determining equipment using a satellite positioning system and utilizing a Kalman filter to reduce positional or location inaccuracy.

510, for Kalman filtering of inputs or outputs of an inertial sensing device in a navigation system employing position-determining equipment.

**537 Using computer network (e.g., Internet, etc.):**

This subclass is indented under subclass 400. Subject matter wherein a system of plural interconnected data processing units is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522, for location determining using a computer network.

SEE OR SEARCH CLASS:

709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses for computer networks, per se.

**538 Having user interface:**

This subclass is indented under subclass 400. Subject matter including a device which permits interaction between an individual and a navigation system.

SEE OR SEARCH THIS CLASS, SUBCLASS:

487- 488, for a GPS system user interface.

**539 Speech recognition or synthesis:**

This subclass is indented under subclass 538. Subject matter wherein the user interface understands conversational sounds spoken by a user or artificially generates conversational sounds providing information to a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

488, for speech recognition or synthesis in a GPS system.

**540 Having particular data storage or retrieval:**

This subclass is indented under subclass 400. Subject matter wherein specific manipulation of information to or from a holding device is utilized.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32.2, for data recording following a collision.

33.4, for storing operational history in a vehicle diagnostic system.

430, for particular data storage or retrieval in route searching or determining.

461-464, for map data storage or retrieval in a map database system.

**541 Portable:**

This subclass is indented under subclass 400. Subject matter wherein a navigation device is readily held and movable between locations by a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.2, for a vehicle diagnostic or maintenance need determination having a portable element.

491, for a portable satellite positioning system.

526, for a portable position determining device.

**FOREIGN ART COLLECTIONS**

The definitions below correspond to abolished subclasses from which these collections were formed. See the Foreign Art Collection schedule of this class for specific correspondences. [Note: The titles and definitions for indented art collections include all the details of the one(s) that are hierarchically superior.]

**FOR 100 Vehicle diagnosis or maintenance indication (701/29):**

This foreign art collection is indented under the class definition. Foreign art collection for vehicle control, guidance, operation, or indication wherein the electrical data processing system or calculating computer is designed to evaluate, monitor, or indicate the performance, operating condition, or servicing need of a vehicle.

**FOR 101 Indication of maintenance interval (701/30):**

This foreign art collection is indented under FOR 100. Foreign art collection for vehicle diagnosis or maintenance indication wherein the electrical data processing system or calculating computer determines and communicates to an interested party, a need for vehicle servicing based on a constraint parameter (e.g., time, operating condition or vehicle millage).

**FOR 102 Self-test (701/31):**

This foreign art collection is indented under FOR 100. Foreign art collection for vehicle diagnosis or maintenance indication wherein the electrical data processing system or

calculating computer functions to check the diagnostic equipment or elements within said system, absent any external device.

**FOR 103 Vehicle or device ID (701/32):**

This foreign art collection is indented under FOR 100. Foreign art collection for vehicle diagnosis or maintenance indication wherein the electrical data processing system or calculating computer generates a signal identifying the vehicle (i.e., make, model, year of manufacture, etc.) or vehicular component to be diagnosed.

**FOR 104 Plural processors or external processor (701/33):**

This foreign art collection is indented under FOR 100. Foreign art collection for vehicle diagnosis or maintenance indication wherein the diagnosis or indication process is facilitated by multiple processors or a remote processor.

**FOR 105 Detection of faulty sensor (701/34):**

This foreign art collection is indented under FOR 100. Foreign art collection for vehicle diagnosis or maintenance indication wherein the electrical data processing system or calculating computer functions to identify a malfunction of a vehicle sensor.

**FOR 106 With data recording device (701/35):**

This foreign art collection is indented under FOR 100. Foreign art collection in which the sensed vehicular condition parameter or diagnostic result is stored in a recording medium.

**FOR 107 NAVIGATION (701/200):**

This foreign art collection is indented under the class definition. Foreign art collection wherein the electrical data processing system or calculating computer functions to determine a course, position, or distance traveled. (1) Note. In Class 116, Signals and Indicators, Digest 43, there exists an unofficial collection of art relating to navigation devices.

**FOR 108 Determination of travel data based on the start point and destination point (701/201):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the electrical data processing system or calculating computer functions to compute, establish, or indicate travel information associated with the distance measured from a present position to a terminating position.

**FOR 109 Route pre-planning (701/202):**

This foreign art collection is indented under FOR 108. Foreign art collection for determination of travel data further comprising a static means to determine a travel course prior to the departure of the vehicle.

**FOR 110 Great circle route (701/203):**

This foreign art collection is indented under FOR 108. Foreign art collection for determination of travel data wherein the course lies along the shortest line between two points on the surface of a sphere.

**FOR 111 Determination of E.T.A. (701/204):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the data processing system or calculating computer functions to determine the time of arrival at a destination.

**FOR 112 Determination of a long-track or cross-track deviations (701/205):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the data processing system or calculating computer functions to determine the deviation of a present position from a desired position in a direction parallel to or perpendicular to the course.

**FOR 113            Employing way point navigation (701/206):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the data processing system or calculating computer functions to determine the position relative to an intermediate point between origin and destination.

**FOR 114            Employing position determining equipment (701/207):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the electrical data processing system or calculating computer functions to compute, establish, or indicate the location of a vehicle based on the information provided by the position determining device.

**FOR 115            For use in a map data base system (701/208):**

This foreign art collection is indented under FOR 114. Foreign art collection for positioning determining equipment wherein the vehicle position information is utilized in conjunction with a map information processing data system.

**FOR 116            route searching or determining device (701/209):**

This foreign art collection is indented under FOR 115. Foreign art collection for map data base system further capable of processing stored electrical data corresponding to locations within a given geographical area to determine a path of travel between a point of origin and a destination point.

**FOR 117            Route correction, modification, or verification (701/210):**

This foreign art collection is indented under FOR 116. Foreign art collection for searching system wherein the electrical data processing system or calculating computer is designed to either (a) alter the path of travel, (b) determine a supplemental path of travel, (c) provide instructions to resume to the original path of travel, or (d) validate vehicle position or course.

**FOR 118            Having audio or visual route guidance (701/211):**

This foreign art collection is indented under FOR 115. Foreign art collection for map data base system further comprising audio or visual information providing directional instructions to follow a chosen path.

**FOR 119            Having variable map scale (701/212):**

This foreign art collection is indented under FOR 115. Foreign art collection for map data base system further capable of being responsive to a predetermined condition to adjust either (a) the graphical representation of a particular geographic region to an appropriate level of detail or (b) the graphical representation of the vehicle to a specified orientation.

**FOR 120            Using Global Positioning System (GPS)(701/213):**

This foreign art collection is indented under FOR 114. Foreign art collection for position determining equipment wherein the electrical data processing system or calculating computer receives positional data via communication with satellites dedicated to a world wide navigational tracking system.

**FOR 121            Means to improve accuracy of position or location (701/214):**

This foreign art collection is indented under FOR 120. Foreign art collection for global positioning system wherein the electrical data processing system or calculating computer utilizes a secondary or supplemental means to more exactly indicate a vehicle's locale.

- FOR 122        Having multiple GPS antennas or receivers (e.g., differential GPS) (701/215):**  
This foreign art collection is indented under FOR 121. Foreign art collection for method of correcting position data having a plurality of devices to collect information from satellites associated with a world wide navigational system.
- FOR 123        Having a self-contained position computing means (e.g., dead reckoning) (701/216):**  
This foreign art collection is indented under FOR 121. Foreign art collection for method of correcting position data having a secondary system for independently calculating or indicating vehicle location for the substitution, modification, or verification of the GPS position data.
- FOR 124        Using dead-reckoning apparatus (701/217):**  
This foreign art collection is indented under FOR 114. Foreign art collection for navigation system wherein position is determined from course and distance made from the last known position and known or estimated drift.
- FOR 125        With R-O (D.M.E. and path) or Tacan equipment (701/218):**  
This foreign art collection is indented under FOR 114. Foreign art collection for navigation system having either Tacan or distance and bearing measuring equipment.
- FOR 126        With Loran or Shoran or Decca equipment (701/219):**  
This foreign art collection is indented under FOR 114. Foreign art for navigation system wherein a position is determined from hyperbolic lines of position.
- FOR 127        With inertial sensor (701/220):**  
This foreign art collection is indented under FOR 114. Foreign art collection for navigation system having a means to sense a force caused by acceleration.
- FOR 128        With correction by noninertial sensor (701/221):**  
This foreign art collection is indented under FOR 127. Foreign art collection for inertial sensor having a means for correction by sensing a noninertial property.
- FOR 129        With star tracker (701/222):**  
This foreign art collection is indented under FOR 114 . Foreign art collection for navigation system further comprising a means to determine the position of the stars.
- FOR 130        With radar or optical ground scanner (223):**  
This foreign art collection is indented under FOR 114. Foreign art collection for navigation system further comprising a means to scan the ground by radar or optically.
- FOR 131        With indicated course correction (compass deviation) (701/224):**  
This foreign art collection is indented under FOR 107. Foreign art collection for navigation system further comprising a means of notification for modified or corrected course.
- FOR 132        Determining range without range measurement (701/225):**  
This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the data processing system or calculating computer functions to determine a travel distance indirectly.



**FOR 133      Space orbits or paths (701/226):**

This foreign art collection is indented under FOR 107. Foreign art collection for navigation system wherein the course, path, or position is outside the atmosphere of a planet.

CLASS 712 - ELECTRICAL COMPUTERS AND DIGITAL DATA PROCESSING SYSTEMS:  
PROCESSING ARCHITECTURES AND INSTRUCTION PROCESSING (E.G.,  
PROCESSORS)

Definitions Modified:

Class Definition: Under SECTION III - REFERENCES TO OTHER CLASSES, SEE OR  
SEARCH CLASS

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 1+ for  
vehicle control, guidance, operation, or indication, subclasses 400-541 for  
navigation, and subclasses 300+ for relative location determination.

CLASS 713 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
SUPPORT

Definitions Modified:

Class Definition: Under SECTION II - REFERENCES TO OTHER CLASSES, SEE OR  
SEARCH CLASS

Delete:

The reference to Class 701

Insert:

701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 1  
through 124 for vehicle control, guidance, operation, or indication, subclasses  
400-541 for navigation, and subclasses 300 -302 for relative location  
determination.