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(65)  
(43)

(73) ( ) 2가 116-175

(72) 613

(74)  
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(54)

(GIS) GPS(Global Position System) , 가 , 3 GPS ,

3

GPS, GIS, GPS , , , , , , ,

1  
2 가 .  
3 .  
4 GPS .  
< >  
10 ... 20 ... GPS  
130 ... 140 ...  
150 ... 230 ...



가 , 1% 가 , 100km 1k  
 m 가 가 (Geodetic Reference System)  
 가 (Geodetic Reference System) 가  
 가

3 GPS GPS GPS 3  
 GPS 3 GPS 3 GPS 3 GPS  
 GPS GIS

- (a) 3 (BX, BY, BZ) 1 (S10 );
- (b) (20) GPS (10) GPS (GX, GY, GZ) 2 (S20 );
- (c) (S30 ) ( , DX = GX - BX, DY = GY - BY, DZ = GZ - BZ ); GPS (DX, DY, DZ) 3
- (d) 2 GPS GPS (20) [X<sub>i</sub>, Y<sub>i</sub>, Z<sub>i</sub> (i=1, 2, ..., n)] 4 (S40 ) ( , i , n );
- (e) 4 5 (S50 );
- (f) 4 3 (TX<sub>i</sub>, TY<sub>i</sub>, TZ<sub>i</sub>) 6 (S60 ) ( , TX<sub>i</sub> = X<sub>i</sub> - DX, TY<sub>i</sub> = Y<sub>i</sub> - DY, TZ<sub>i</sub> = Z<sub>i</sub> - DZ ); 5
- (i) GPS 5-1 (S110 );
- (ii) GPS 5-2 (S120 );
- (iii)
- (iv) 5-3 (S130 );
- (v) 5-4 (S140 ); GPS
- (vi) 5-5 (S160, S161 ); GPS
- 5-6 (170 ) 5-3

GPS GIS 3 GIS  
 GPS GIS  
 240) 1 GPS (100) 3 ( (3)  
 GPS (100) GPS (120) (230)  
 (GYRO) (130)  
 (140) (150)  
 (170) , 가 (160) ,  
 (180) , GPS (200) , (220)

. GPS (120) GPS 3  
 (130), (140)  
 (230)  
 가 GIS , GPS  
 GPS 가 가 GPS (30)  
 GPS GPS  
 GPS GPS 가 GPS  
 GPS GPS 가  
 1 : 3 2 3 (BX, BY, BZ) (S10<sub>3</sub>) (BX, BY, BZ)  
 2 : (20) GPS (10) GPS  
 (GX, GY, GZ) (S20 )  
 3 : GPS GPS (DX, DY, DZ)  
 (S30 ); , DX = GX - BX, DY = GY - BY, DZ = GZ - BZ  
 4 : 2 GPS GPS (20)  
 [X<sub>i</sub>, Y<sub>i</sub>, Z<sub>i</sub> (i=1, 2,...,n)] (S40 ); , n  
 5 : 4 (S50 )  
 6 : 4 3 (TX<sub>i</sub>, TY<sub>i</sub>, TZ<sub>i</sub>)  
 (S60 ); , TX<sub>i</sub> = X<sub>i</sub> - DX, TY<sub>i</sub> = Y<sub>i</sub> - DY, TZ<sub>i</sub> = Z<sub>i</sub> - DZ  
 7 : 6 4 GPS GPS 가  
 4 , 5  
 4 GPS (TX<sub>i</sub>, TY<sub>i</sub>, TZ<sub>i</sub>)  
 가 , GPS 가  
 GPS 가  
 4 GPS GPS  
 5-1 : GPS (S110 )  
 5-2 : GPS (S120 )  
 5-3 : (S130 )  
 5-4 : 3 GPS  
 (S140 ) 3  
 5-5 : 5-4 가 (S150 ), GPS (S160 )  
 GPS (S161 ) S150 가  
 10M  
 5-6 : 5  
 -3 (170 )  
 (230) GPS (230)  
 PS GPS (20) 가 G

GIS

가

가

가

3 GPS GIS 가

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1.

3 GPS 3 GPS

GPS

(GIS)

GIS

- (a) 3 (BX, BY, BZ) 1 (S10 );
- (b) (20) GPS (10) GPS (GX, GY, GZ) 2 (S20 );
- (c) (S30 ) ( , DX = GX - BX, DY = GY - BY, DZ = GZ - BZ ); GPS (DX, DY, DZ) 3
- (d) 2 GPS GPS (20) [X<sub>i</sub>, Y<sub>i</sub>, Z<sub>i</sub> (i=1, 2,...,n)] 4 (S40 ) ( , i , n );
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- (f) 4 3 (TX<sub>i</sub>, TY<sub>i</sub>, TZ<sub>i</sub>) 6 (S60 ) ( , TX<sub>i</sub> = X<sub>i</sub> - DX, TY<sub>i</sub> = Y<sub>i</sub> - DY, TZ<sub>i</sub> = Z<sub>i</sub> - DZ ); 5
- (i) GPS 5-1 (S110 );
- (ii) GPS 5-2 (S120 );
- (iii) 5-3 (S130 );
- (iv) 3 GPS 5-4 (S140 );
- (v) 5-4 가 , GPS GPS 5-5 (S160, S161 );
- (vi) 5-6 (170 ) 3 GPS GIS





