



Rujukan Kami: JUPEM 18/7/2.148 (89)

Tarikh: 29 September 2005

Semua Pengarah Ukur dan Pemetaan Negeri

**PEKELILING KETUA PENGARAH UKUR DAN PEMETAAN
BIL. 11 TAHUN 2005**

**KEWAJIPAN JURUUKUR TANAH BERLESEN
MENGEMUKAKAN DATA UKURAN KADASTER BERDIGIT**

1. TUJUAN

Pekeliling ini bertujuan untuk mewajibkan Juruukur Tanah Berlesen (JTB) mengemukakan data ukuran kadaster berdigit kepada Pengarah Ukur dan Pemetaan Negeri (PUPN), selaras dengan perlaksanaan sepenuhnya 'Field-to-Finish' (F2F) di Jabatan Ukur dan Pemetaan Malaysia (JUPEM).

2. LATARBELAKANG

- 2.1 Pekeliling KPUP Bil. 1/1997 telah dikeluarkan supaya JTB menghantar hasil kerja dalam bentuk berdigit dan juga *hard-copy*, manakala prosedur penerimaan dan semakan kerja ukur hakmilik tanah yang dikemukakan oleh JTB adalah berdasarkan kepada Pekeliling KPUP Bil. 1/2001.
- 2.2 Pada tahun 2004, JUPEM telah membangunkan *Licensed Land Surveyor Module (LLSM)* untuk menyemak secara berdigit sepenuhnya kerja ukuran kadaster yang dijalankan oleh JTB. Modul ini dapat mempercepatkan proses semakan dan penyediaan hakmilik B1 TIFF.
- 2.3 Sehubungan itu, bagi memenuhi hasrat di atas, JTB dikehendaki melaksana dan mengemukakan hasil kerja digital sepenuhnya kepada JUPEM Negeri.

3. FORMAT DATA BERDIGIT

JTB hendaklah menghantar format data berdigit dalam bentuk ASCII yang terdiri daripada:

- i. .fbk – Field Observation Data
- ii. .cor – Corrections
- iii. .sob – Solar Observation Data
- iv. .bcs – Bearing Close Statement
- v. .acs – Area Comparison
- vi. .ncp – Deduced Field Data
- vii. .tps – Traverses
- viii. .lot – Lot Details
- ix. .bdy – Bearing, Distance & Coordinates
- x. .job – Job Details
- xi. .edm – EDM Test
- xii. .fah – Fahrasat
- xiii. .coo – Coordinates Information
- xiv. .bln – Base Line
- xv. .tpo – Topography
- xvi. .po – Old Value

Serta;

- i. .tiff - Certified Plan
- ii. .pdf - Calculation Volume
- iii. .xml - Digital Signature

Struktur format yang perlu dihantar adalah seperti di **Lampiran 'A'**.

4. TINDAKAN JUPEM NEGERI

JUPEM Negeri hendaklah memproses data berdigit yang dihantar oleh JTB mengikut tatacara yang ditetapkan oleh Jabatan. Carta aliran bagi proses kerja JTB adalah seperti di **Lampiran 'B'**.

5. TARIKH BERKUATKUASA

- 5.1 Bagi kerja yang mana nombor lot dikeluarkan **mulai 01 Januari 2006**, data ukuran kadaster hendaklah dihantar mengikut format yang terdapat dalam pekeliling ini;
- 5.2 Bagi kerja yang mana nombor lot dikeluarkan **sebelum 01 Januari 2006**, data ukuran kadaster boleh dikemukakan mengikut amalan semasa (Pekeliling KPUP Bil. 1/1997) **sehingga 30 Jun 2007**;

- 5.3 Semua JTB adalah digalakkan untuk menghantar data ukuran kadaster dalam bentuk berdigit sepenuhnya mulai sekarang; dan
- 5.4 **Mulai 01 Julai 2007**, JUPEM Negeri hanya akan menerima data ukuran kadaster mengikut format yang terdapat dalam pekeliling ini sahaja.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"



(DATO' HAMID BIN ALI)
Ketua Pengarah Ukur dan Pemetaan
Malaysia

Salinan Dalaman :

Timbalan Ketua Pengarah Ukur dan Pemetaan
Pengarah Ukur Bahagian Kadaster
Pengarah Ukur Bahagian Pemetaan

Salinan Luaran :

Setiausaha,
Lembaga Juruukur Tanah Semenanjung Malaysia

Struktur Fail LLSM ASCII

No	EDM			Fahrasat			Fieldbook			Corrections			Solar Observations			Bearing Close Statement			Area Comparison		
	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null
1.	InstNo ¹	50	N	FileName ²	10	N	FileName ²	10	N	FileName ²	10	N	FileName ²	10	N	FileName ²	10	N	FileName ²	10	N
2.	Negeri ³	2	N	FileNo ²	20	N	FileNo ²	20	N	FileNo ²	20	N	FileNo ²	20	N	FileNo ²	20	N	FileNo ²	20	N
3.	SurveyorIC	50	N	SurveyType ⁴	2	N	StnFromNo	10	Y	StnFromNo	10	Y	OccStnNo	10	N	StnFromNo	10	N	Negeri	2	N
4.	Location	50	Y	Negeri	2	N	StnFromType ⁵	10	Y	OccStnNo	10	N	OccStnType	10	N	StnFromType	10	N	Daerah	2	N
5.	Code ⁶	1	N	Daerah	2	N	StnFromSerial	10	Y	StnToNo	10	N	OccStnSerial	10	Y	StnFromSerial	10	Y	Mukim	2	N
6.	JUBLID ⁷	10	Y	Mukim	2	N	OccStnNo	10	N	CorrectionNo ⁸	10	N	OccCorNorth	12	N	OccStnNo	10	N	Seksyen	3	N
7.	PillarFrom ⁹	2	N	Seksyen	3	N	OccStnType ⁵	10	N	ValuePerStone ¹⁰	16	N	OccCorEast	12	N	OccStnType	10	N	Lot	7	N
8.	PillarTo ⁹	2	N	Lot	7	N	OccStnSerial	10	Y	Index ¹¹	10	N	StnToNo	10	N	OccStnSerial	10	Y	SKLArea	16	N
9.	StdPillarDist ¹²	10	N	SurveyorIC	50	N	StnToNo	10	N	CorrectionType ¹³	2	N	StnToType	10	N	StnToNo	10	N	PUArea	16	N
10.	InstPillarDist ¹⁴	10	N	StartDate	8 (yyyymmdd)	N	StnToType ⁵	10	N	StartStation ¹⁵	10	N	StnToSerial	10	Y	StnToType	10	N	SvyArea	16	N
11.	DistanceDiff ¹⁶	10	N	EndDate	8 (yyyymmdd)	N	StnToSerial	10	Y	LineCode ²⁹	2	N	SurveyorName	50	N	StnToSerial	10	Y	Percentage ¹⁷	16	N
12.	SumDiff ¹⁸	10	N	InstNo	50	N	CLFrom	8 (deg.mmss)	Y				InstNo	50	Y	ReadBearing ²⁸	8 (deg.mmss)	N	Misclosure ¹⁹	16	N
13.	ObsTime ²⁰	6 (hhmmss)	N	Remarks	50	Y	CRFrom	8 (deg.mmss)	Y				Date ²¹	8 (yyyymmdd)	N	SReadBearing ^{28, 22}	8 (deg.mmss)	N			
14.	ObsDate ²³	8 (yyyymmdd)	N				CLTo	8 (deg.mmss)	N				OBS_NO	2	N	DiffBearing ²⁸	8 (deg.mmss)	N			
15.	Temp ²⁴	10	N				CRTTo	8 (deg.mmss)	N				CL_RO_1 ^{25, 28}	8 (deg.mmss)	N	TotalOccStn ²⁶	3	N			
16.	Updated ²⁷	8 (yyyymmdd)	N				AvgBearing ²⁸	8 (deg.mmss)	N				H_CL_SUN_TR	8 (deg.mmss)	N	CorrNo ⁸	3	N			
17.							VAToCL	8 (deg.mmss)	N				V_CL_SUN_TR	8 (deg.mmss)	N	CorrPerStn ¹⁰	8 (deg.mmss)	N			
18.							VAToCR	8 (deg.mmss)	N				OBS_TIME_1	6 (hhmmss)	N	Remarks	30	Y			
19.							SDToCL	10	N				H_CL_SUN_TL	8 (deg.mmss)	N						
20.							SDToCR	10	N				V_CL_SUN_TL	8 (deg.mmss)	N						
21.							HD	10	N				OBS_TIME_2	6 (hhmmss)	N						
22.							ObsDate	8 (yyyymmdd)	N				H_CR_SUN_TL	8 (deg.mmss)	N						
23.							ObsTime	6 (hhmmss)	N				V_CR_SUN_TL	8 (deg.mmss)	N						
24.							LineCode ²⁹	2	N				OBS_TIME_3	6 (hhmmss)	N						
25.							Remarks	30	Y				H_CR_SUN_TR	8 (deg.mmss)	N						
26.							ParentFrom ³⁰	10	Y				V_CR_SUN_TR	8 (deg.mmss)	N						
27.							ParentTo ³¹	10	Y				OBS_TIME_4	6 (hhmmss)	N						
28.												AVG_TIME	6 (hhmmss)	N							
29.												CR_RO	8 (deg.mmss)	N							
30.												AVG_ZENITH	8 (deg.mmss)	N							
31.												AVG_H	8 (deg.mmss)	N							
32.												AVG_RO	8 (deg.mmss)	N							
33.												REF_COOR	8 (deg.mmss)	N							
34.												DECLINATION	8 (deg.mmss)	N							
35.												AZIMUTH_CAL	8 (deg.mmss)	N							
36.												TRUE_BEARING	8 (deg.mmss)	N							
37.																					
Name	xxx.edm			xxx.fah			xxx.fbk			xxx.cor			xxx.sob			xxx.bcs			xxx.acs		

No	NCP			TPS (crlf delimited)			LOT			BOUNDARY			JOB			Surveyed Station		
	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null
1.	OccStnNo	10	N	ObjectInfo ³²	256	N	UJI	16	N	UJI	16	N	SurveyedFileNo	18	N	FileName ²	10	N
2.	OccStnType ⁵	10	Y	Ordinate ³³	GLOB	N	CentroidX	12	N	FromMarkDesc ⁵	13	N	CompletedDate	10	N	FileNo ²	20	N
3.	OccStnSerial	10	Y	RecordsDelim ³⁴	3 (END)	N	CentroidY	12	N	FromStnNo	10	N	CVApprovedDate	10	Y	StnNo	10	N
4.	StnToNo	10	N				Area	16	N	FromX	12	N	StartCalVolNo	4	Y	MarkDesc ⁵	10	N
5.	StnToType ⁵	10	Y				Unit ³⁵	3	N	FromY	12	N	StartPageNo	3	Y	Serial	10	Y
6.	StnToSerial	10	Y							FromCoorType	1	N	EndCalVolNo	4	Y	North	12	N
7.	FinalBearing ²⁸	10 (deg.mmss)	N							Bearing ²⁸	9	N	EndPageNo	3	Y	East	12	N
8.	FinalDistance	10	N							Distance	10	N				Code ³⁶	10	N
9.	Remarks	10	Y							Unit ³⁷	3	N				Remarks	30	Y
10.	LineCode ²⁹	2	Y							ToMarkDesc ⁵	13	N						
11.										ToStnNo	10	N						
12.										ToX	12	N						
13.										ToY	12	N						
14.										ToCoorType	1	N						
15.										Class ³⁸	1	N						
16.										LineCode ²⁹	2	N						
17.										ValueCode ³⁹	2	N						
18.										Plan	12	Y						
19.										Remark	12	Y						
20.																		
Name	xxx.ncp			xxx.tps			xxx.lot			xxx.bdy			xxx.job			xxx.coo		

No	Topo Offset			PO			Baseline		
	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null
1.	Filename ²	10	N	Filename ²	10	N	Filename ²	10	N
2.	FileNo ²	20	N	FileNo ²	20	N	FileNo2	20	N
3.	StnFromNo	10	N	Plan	12	N	StnFromNo	10	Y
4.	OccStnNo	10	N	UPI	16	N	OccStnNo	10	N
5.	StnToNo	10	N	ApDate ⁴¹	8	N	StnToNo	10	N
6.	Code ⁴²	5	N	Class	1	N	BaseLineNo49	10	N
7.	StringNo ⁴⁴	10	N	Bearing ²⁸	8	N	Index50	10	N
8.	Ordered	10	N	Distance	10	N	BaseLineType51	3	N
9.				Unit ³⁵	1	N	LineCode ²⁹	2	N
10.				StnFromNo	10	Y			
11.				StnFromPointKey	40	Y			
12.				StnFromType ⁵	10	Y			
13.				StnFromSerial	10	Y			
14.				StnFromNorth	12	Y			
15.				StnFromEast	12	Y			
16.				StnOccNo	10	N			
17.				StnOccPointKey	40	N			
18.				StnOccType ⁵	10	N			
19.				StnOccSerial	10	Y			
20.				StnOccNorth	12	N			
21.				StnOccEast	12	N			
22.				StnToNo	10	N			
23.				StnToPointKey	40	N			
24.				StnToType ⁵	10	N			
25.				StnToSerial	10	Y			
26.				StnToNorth	12	N			
27.				StnToEast	12	N			
Name	xxx.tpo			xxx.po			xxx.bin		

1. Instrument no. E.g. 1234gty123
2. File number e.g. 1-2002. (FileName + FileNo = PUPWP12/2002)
 - a. (Refer as FileNo or SvyFileNo) JUPEM & LS e.g. PUSEL416/2001, PUBLSEL438/1999
 - b. SEL = Selangor, BL = License Surveyor
3. Negeri Code, e.g 01 = Johor, 02 = Kedah, 03 = Kelantan, 04 = Melaka, 05 = Negeri Sembilan, 06 = Pahang, 07 = Pulau Pinang, 08 = Perak, 09 = Perlis, 10 = Selangor, 11 = Terengganu, 14 = Wilayah Persekutuan KL, 16 = Putrajaya
4. Cantuman = 1, Pecahan Lot-Lot = 2, Ukuran Bermilik Tanah Kerajaan = 3, Strata = 4, Pengambilan = 5, Penyerahan Sebahagian Lot = 6, Ukuran Semula = 7, Ukuran Pengesahan = 8, Rizab = 9, Serahan Dan Bermilik Semula = A, Ukuran Bermilik & Pecahan T. Kerajaan = B, Gazet = G, Verifikasi = V
5. According to Pekeliling Ketua Pengarah Ukur dan Pemetaan 2002 :
BKB = Batu Konkrit Baru, BL = Batu Lama, BKL = Batu Konkrit Lama, PpBB = Pepaku Besi Baru, PB = Paip Baru, PL = Paip Lama, TKL = Tiang Konkrit Lama, PgKL = Pancang Konkrit Lama, pKB = Paku Baru, PkL = Paku Lama, TT = Tiada Tanda, PpBL = Pepaku Besi Lama, TAB = Tanda atas Batu, PTU = Peti Tanda Ukur, PgKK = Pancang Kayu Keras, Tp = Tanam Pastian, Pkt = Piket, GPS = GPS

Legacy Code:
BKBB = Batu Konkrit Baru Bernombor, BKUL = Batu Konkrit Ukuran Lama, BB = BB, TKB = Tiang Konkrit Baru, PgKB = Pancang Konkrit Baru,
6. 0, from department; 1, from JUBL
7. JUBL registered company ID e.g. (14051-V)
8. The order of the correction being calculated. For example: If survey job has 3 corrections then the correction number for first correction is 1, for the second one is 2 and so on
9. Numeric e.g. 1 or 2

10. Value per stone in decimal format. For example: -0.00022344
11. Integer that use to mutiply the value per stone to get the value of current C or M correction
12. Pillar distance standard
13. M = Meridian, C = Circuit
14. Pillar distance read from total station
15. The static station that use for particular adjustment. When a correction is deleted, the entire coordinate except the static station will be adjusted to the original value
16. Distance difference (StdPillarDist - InstPillarDist). E.g. 0.001
17. First class survey can have only 5% difference or less
18. Total previous DiffDistance – DiffDistance. E.g 0.001
19. First class survey can have only 1:8000 ratio or more
20. Observation Time
21. Tarikh Cerapan
22. Should read bearing
23. Observation Date
24. The temperature at observation in Celsius
25. C = Circle, L = Let, R = Right, RO = Reference Object, V = Vertical, H = Horizontal, T = Target, A = Angle, S = Slope, D =Distance
26. Total occupied stations. ~30
27. Last modify date

28. Deg.mmss e.g. 103.3010
29. TSM Code
- a. Unknown = 0 Boundary = 1 Connection = 2 Revised = 3 Datum = 11 Traverse = 12 OnLine = 13
 CloseBearing = 14 Azimuth = 15 Calculated = 16 Produced = 17 TP(Tanam Pastian) = 18 Topo = 19 Dpi/KI = 20
 EDM = 21 Diff_Test = 22 OnlineCheck = 23 TT(Tiada Tanda) = 24 CheckAngle = 25 PO (Per Origin) = 26 Cancel = 99
30. This station number represents occupied station of online's parent
31. This station number represents front station of online's parent
- a. T = Traverse e.g. T, 1
- b. B = Boundary e.g. B, 2
- c. C = Connection e.g. C, 3
- d. L = Lot (LotNo, Negeri, Daerah, Mukim/Pekan/Bandar, Seksyen, Area) e.g. L, 2183, 06, 05, 07, 000, 1300.000
- e. K = Coordinate, R = Rigid, P = Plotting e.g. K, 20, R or K, 20, P
32. For T, B, C, L e.g. 54, 45, 44, 55
33. For K (x, y,,,, unit) e.g. 52475.890, -4142.304,,,, M
34. Fill with "END"
35. A = Acre, F = Square Feet, H = Hectare, M = Square Meter, R = Acre.rod.poles (ASCII using 0.0.0, Database using Acre unit)
- a. $A2 = 4046.856 \text{ M}^2$
- b. $F2 = .09290304 \text{ M}^2$
- c. $H = 10000 \text{ M}^2$

d. $M2 = 1 M^2$

e. $Rod2 = 25.29285 M^2$

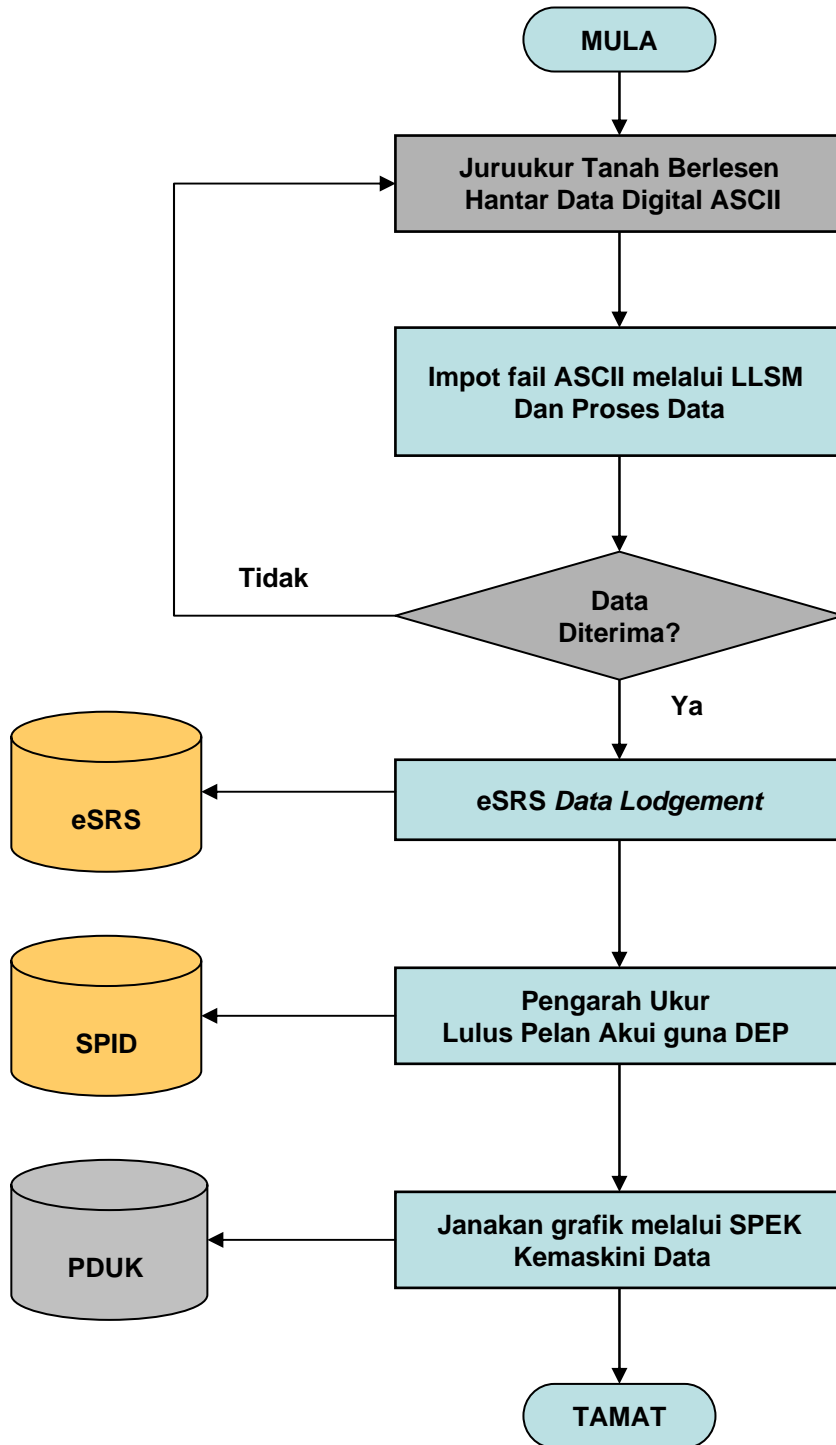
f. $ekar = 4 rod$

g. $rod = 40 pole$, e.g. 8.3.0

36. 0 = Unknown, 1 = PDUK, 2 = Assumed, 3 = SKL, 4 = Traverse, 5 = OnLine, 6 = GPS, 7 = Diff_Test, 8 = Topo, 9 = KnownPoint, -1 = Cancel
37. F = Feet, L = Link, I = Inch, D = Depa (Kelantan), M = Meter
38. 1 = First Class, 2 = Second Class, 3 = Third Class, D = Demarcation, P = PU, 0 = Not Set
39. 0 = Survey Line, 1 = Ki(ra) Line, 2 = Scaled Line, 3 = Not Set
40. 1 = Hadir, 2 = Tak Hadir, 3 = Cuti Rehat(119 E), 4 = Cuti Sakit Swasta(118 E), 5 = Cuti Sakti Kerajaan(118 E), 6 = Non-Effective, Latihan Dan Cuti Panjang(121 E), 7 = Cuti Tanpa Rekod, 8 = Cuti Rehat Sabtu, 9 = Hari Tidak Kerja Luar, 10 = Hari Ahad, 11 = Hari Cuti Kelepasan Am
41. Approve Date
42. String code denote same offset object
43. S = Sementara, T = Tetap
44. String number denote same feature
45. Ringgit Malaysia
46. BKBB = Batu Konkrit Bernombor Baru Ditanam, BKB = Batu Konkrit Kosong Ditanam, BKU = Batu Konkrit Diubah, Default = 0
47. Full Mileage Claim. Y=Yes, N=No
48. H=Hotel, L=Lojing, F=Food, E=Elaun Harian, M=Mileage, D=Dobi, T=Telephone, O=Tol, P=Parking, S=Post, A= Taxi, B= Bus, R= Train, Y= Ferry, N=Others, K=Elaun Kerja Luar, C= Others(Tuntutan Pelbagai), W=Wang Asing

49. The order of the baseline being calculated. For example: If survey job has 3 baselines then the baseline number for first baseline is 1, for the second one is 2 and so on
50. Integer that use to indicate the sequence of the selected PO or New line to form the baseline
51. PO = Per Origin, New = Traverse

**CARTA ALIR KERJA BAGI MEMPROSES
DATA DIGITAL DARI JURUUKUR TANAH BERLESEN**



Nota:
 ASCII : American Standard Code for Information Interchange
 LLSM : Licensed Land Surveyor Module
 eSRS : electronic Survey Record System
 SPID : Sistem Pengurusan Imej Dokumen
 DEP : Digital End Product
 SPEK : Sistem Pengesahan Kualiti
 PDUK : Pangkalan Data Ukur Kadaster
 TIFF : Tagged Image File Format