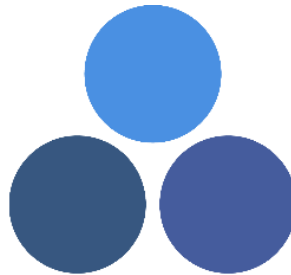# National ANPR Service
Technical Specifications

Version 3.6 Final
December 2024

Document Revisions

Version	Date	Changes	Owner
Version 3.1	May 2021	Minor revision of VOI template in line with Reg 109 requirements	TAG Chair
Version 3.2	December 2021	Minor revision of VOI list template at request of Technical Advisory Group to ensure clarity and consistency with Reg 109 supplier document	TAG Chair
Version 3.3	January 2022	Minor revision to Section 4 and VOI list template	TAG Chair
Version 3.4	January 2022	Update wording section 4 and additions to VOI list naming convention	TAG Chair
Version 3.5	October 2024	Full review of document by TAG - Out of date content and entries already covered elsewhere (NASPLE / R109) removed. Transliteration table included	TAG Chair
Version 3.6	December 2024	Camera Naming section included	TAG Chair

Contents

Definitions

Acronym	Description
ANPR	Automatic Number Plate Recognition
ANPR Data	Includes the Vehicle Registration Mark (VRM) as interpreted by the ANPR System together with associated records of location of the ANPR camera that obtained the data together with details of the time of collection and any images associated with that data
ANPR Read	The interpretation of a VRM by an ANPR system with associated reference to time and location.
ANPR System	A collection of cameras, readers components linking to NAS
Camera	The device used to capture an ANPR read
Communications Link	The connections between the camera, any local infrastructure, and the NAC
GPS	Global Positioning System
Hit	The report of a match of a vehicle registration mark (VRM) read with a VRM that is included on a vehicle of interest list (VOI)
JPEG	Joint Photographic Expert Group image format
LEA	Law Enforcement Agency – Includes police forces and other agencies undertaking law enforcement activities.
LEDS	Law Enforcement Data Service – a replacement for the Police National Computer (PNC)
NAC	National ANPR Capability includes: • the core NAS which is a national system consisting of the functionality to enable use for operational response, investigation and intelligence purposes and a national store of data, and, • the NSAP which is a national data services platform which will provide ANPR data to local 'Back Office Function' (BOF) applications, and, • any other national store of data provided for law enforcement purposes relating to terrorism and serious criminal offences. • local ANPR systems to enable use for operational response, investigation, and intelligence purposes, and, • the National ANPR Infrastructure (NAI) which is a network of ANPR cameras, communications links, firewalls, and other related supporting components, which are the responsibility of LEAs, which connect to the NAC.

Acronym	Description
NAI	A network of ANPR cameras, communications links, firewalls, and other related supporting components
NAS	The core National ANPR Service
NASP	National ANPR Standards for Policing first version published in 2013 and replaced by NASPLE, recognising the applicability to all law enforcement agencies that access the NAC
NASPLE	National ANPR Standards for Policing and Law Enforcement.
NSAP	The National Strategic ANPR Platform is a national data services platform which will provide ANPR data to local 'Back Office Function' (BOF) applications.
National VOI List	Nationally circulated lists that include stolen vehicles, vehicles requiring an operational response and vehicles within Schengen circulations
PNC	Police National Computer
Regulation 109	The Road Vehicles (Construction and Use) Regulations 1986 (Reg 109)
VOI	The details of a vehicle that are of interest to law enforcement for operational response or investigation purposes that is included on a list to enable it to be read and for authorised staff to receive a report of that read.
VRM	Vehicle Registration Mark

1 Introduction

This document prescribes the technical specifications for data within the National ANPR Capability (NAC). Systems must support interoperability within the NAC to allow:

- Real-time matching of ANPR reads against lists of VOI and the real-time delivery of hits.

- Remote research in accordance with prevailing researching guidelines

- Read searching for national data searches and data mining in accordance with the NAS Business Rules, as defined within current NASPLE

- Distribution of lists of vehicles of interest to the NAS

- Transfer of data and all associated images between LEA NAI and the NAC.

National ANPR Standards for Policing and Law Enforcement (NASPLE) set out the standards that are required for the National ANPR Capability (NAC) to ensure compliance with relevant legislation in the operation and use of law enforcement ANPR.

The information within this document is intended to support compliance and consistency in the operation and management of NAC by the Police and other Law Enforcement Authorities (LEA) and should be read in conjunction with the current National ANPR Standards for Policing and Law Enforcement (NASPLE).

2 Camera Naming

The creation and naming of cameras within the NAI and their configuration in the NAS, is a crucial requirement to ensure data integrity and quality. Police and Law Enforcement Agency ANPR Administrators must ensure they are familiar with the structures and terminology contained within the NAS Camera Mapping and Hierarchical Structure document (available from the Home Office) when setting up new cameras, making changes, or decommissioning cameras.

Every camera lane, both fixed and mobile, MUST have a unique identifier (also known as Triplet, FUC Code, BOF ID, Source ID) consisting of 3 elements:
- FORCE ID
- UNIT ID
- CAMERA LANE ID

An example is, **71_999_1**

The UNIT ID and CAMERA LANE ID must each consist of a minimum of 1 digit and a maximum of 4 digits.

The unique identifier (i.e. Triplet, FUC Code, BOF ID, Source ID) should be exclusive to a location. They are NOT transferrable, if a camera is relocated, it should be issued with a new unique identifier.

It is a NAS technical requirement that all parts of the unique identifier are separated by underscores, with a further underscore following the CAMERA LANE ID to denote the end of the identifier and the start of the camera name, which is free text to describe the camera location and direction of travel.

There is a limit of 80 characters including the unique identifier.

An example is, **71_999_1**_L1 A686 Sandforth Area Northbound Westshire

For further information/detail on camera naming and evidential presentation, please refer to the latest version of the NAS Camera Mapping and Hierarchical Structure document.

3   ANPR Read Records

3.1 System Testing

The only number that may be entered into any component of the NAC for the purpose of testing connectivity is QQQ111Q.

3.2 Core Data Components

3.2.1 Vehicle Registration Mark (VRM) (Mandatory)

The required format must conform to the Standard Coding Format UTF8 character set and the SIS2 Transliteration Guidance (see Appendix A). The VRM must contain no spaces.

Where a new camera is installed and has the capability to record images of vehicles passing within the field of view where no VRM is identified by the system, 'QMOTION' must be recorded within the VRM field. 'QQQQQQQ' is supported where existing cameras cannot be changed via configuration or upgrade.

Where a camera has the capability to maintain power for a period following the loss of mains power to the camera, 'QPWRFAIL' must be recorded within the VRM field. When mains power is restored to the camera, 'QPWRREST' must be recorded within the VRM field.

Where there is a requirement to transmit other specialist messages from roadside infrastructure, a VRM beginning with the Q character must be used, for example QXXXXXX. Numeric characters must not be used.

3.2.2 Time (Mandatory)

Recorded and synchronised using standard time source techniques to Greenwich Mean Time (GMT) plus 0 (+0) at least once every 10 minutes, with accuracy to stratum level 3.

The required format is 'dd/mm/yyyy hh:mm:ss', in 24 hour format.

3.2.3 Location (Mandatory)

ANPR data must place a mobile read in a location, accurate to within 10 metres. This location should have been ascertained through a Global Positioning System (GPS) device. For fixed cameras, the GPS location of the read should be hard coded to within 5 metres of the correct position on the carriageway where the vehicle is being captured.

The required format for recording a location is latitude and longitude in decimal degrees.

When a mobile ANPR system is unable to deliver an accurate GPS coordinate for a read, the GPS field must be populated with N0000000 E00000000

3.2.4 Supporting Imagery

Plate patch – showing the number plate only, (Mandatory for systems under ownership or control of an LEA).

A plate patch must be in JPEG format, 120x60 pixels and be no more than 3KB in size.

Overview – showing the vehicle in the context of the read zone (Optional). An overview image must be in JPEG format, no more than 25KB in size.

Where images obtained by a camera exceed 3KB for a plate patch or 25KB for an overview, these must be adjusted prior to forwarding to the NAS.

'Geo Tagging', if an accurate GPS Geo Location is available, then this detail may be added to images using Exif (Exchangeable image file format) (Optional)

3.2.5 Supporting Data

Data between the camera and the Back Office Function (BOF) and/or the Management Server, for sending to the national systems within the NAC, must be in a format to meet any validation and error handling requirements of the NAC. Most common supported formats include UTMC 1.1, UTMC 1.2 and Web Services. This is not an exhaustive list.

4   Vehicle of Interest (VOI) Lists

VOI lists must meet the specification as set out in the Regulation 109 Specification Document, the current version of which can be found here.

Transliteration Values

Numeric characters

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
1	0	0	0030	0030	0
2	1	1	0031	0031	1
3	2	2	0032	0032	2
4	3	3	0033	0033	3
5	4	4	0034	0034	4
6	5	5	0035	0035	5
7	6	6	0036	0036	6
8	7	7	0037	0037	7
9	8	8	0038	0038	8
10	9	9	0039	0039	9

Latin characters

Standard Transliteration for Latin characters

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
1	A, a	A	0041	0061	A
2	B, b	B	0042	0062	B
3	C, c	C	0043	0063	C
4	D, d	D	0044	0064	D
5	E, e	E	0045	0065	E
6	F, f	F	0046	0066	F
7	G, g	G	0047	0067	G
8	H, h	H	0048	0068	H
9	I, i	I	0049	0069	I
10	J, j	J	004A	006A	J
11	K, k	K	004B	006B	K
12	L, l	L	004C	006C	L
13	M, m	M	004D	006D	M
14	N, n	N	004E	006E	N
15	O, o	O	004F	006F	O
16	P, p	P	0050	0070	P
17	Q, q	Q	0051	0071	Q
18	R, r	R	0052	0072	R
19	S, s	S	0053	0073	S
20	T, t	T	0054	0074	T
21	U, u	U	0055	0075	U
22	V, v	V	0056	0076	V
23	W, w	W	0057	0077	W
24	X, x	X	0058	0078	X
25	Y, y	Y	0059	0079	Y
26	Z, z	Z	005A	007A	Z

Special characters

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Normalisation
1	'.'	Full Stop	002E	002E	remove
2	'-'	Hyphen	002D	002D	remove
3	'/'	Solidus	002F	002F	remove
4	'''	Apostrophe	0027	0027	remove
5	'('	Left parenthesis	0028	0028	remove
6	')'	Right parenthesis	0029	0029	remove
7	'?'	Question mark	003F	003F	remove
8	':'	Colon	003A	003A	remove
9	','	Comma	002C	002C	remove
10	'+'	Plus sign	002B	002B	remove
11	'blank'	Space	0020	0020	remove

Multinational characters

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
1	Á, á	A acute	00C1	00E1	A
2	À, à	A grave	00C0	00E0	A
3	Â, â	A circumflex	00C2	00E2	A
4	Ä, ä	A diaeresis	00C4	00E4	AE
5	Ã, ã	A tilde	00C3	00E3	A
6	Ă, ă	A breve	0102	0103	A
7	Å, å	A ring	00C5	00E5	AA
8	Ā, ā	A macron	0100	0101	A
9	Ą, ą	A ogonek	0104	0105	A
10	Ć, ć	C acute	0106	0107	C
11	Ĉ, ĉ	C circumflex	0108	0109	C
12	Č, č	C caron	010C	010D	C
13	Ċ, ċ	C dot accent	010A	010B	C
14	Ç, ç	C cedilla	00C7	00E7	C
15	Ð, ð	Eth	00D0	00F0	D
16	Đ, đ	D with Stroke	0110	0111	D
17	Ď, ď	D caron	010E	010F	D
18	É, é	E acute	00C9	00E9	E
19	È, è	E grave	00C8	00E8	E
20	Ê, ê	E circumflex	00CA	00EA	E
21	Ë, ë	E diaeresis	00CB	00EB	E

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
22	Ě, ě	E caron	011A	011B	E
23	Ė, ė	E dot accent	0116	0117	E
24	Ē, ē	E macron	0112	0113	E
25	Ę, ę	E ogonek	0118	0119	E
26	Ĕ, ĕ	E breve	0114	0115	E
27	Ĝ, ĝ	G circumflex	011C	011D	G
28	Ğ, ğ	G breve	011E	011F	G
29	Ġ, ġ	G dot accent	0120	0121	G
30	Ģ, ģ	G cedilla	0122	0123	G
31	Ħ, ħ	H bar	0126	0127	H
32	Ĥ, ĥ	H circumflex	0124	0125	H
33	I, ı	I without dot (Turkey)	0049	0131	I
34	Í, í	I acute	00CD	00ED	I
35	Ì, ì	I grave	00CC	00EC	I
36	Î, î	I circumflex	00CE	00EE	I
37	Ï, ï	I diaeresis	00CF	00EF	I
38	Ĩ, ĩ	I tilde	0128	0129	I
39	İ, i	I dot accent	0130	0069	I
40	Ī, ī	I macron	012A	012B	I
41	Į, į	I ogonek	012E	012F	I
42	Ĭ, ĭ	I breve	012C	012D	I
43	Ĵ, ĵ	J circumflex	0134	0135	J
44	Ķ, ķ	K cedilla	0136	0137	K
45	Ł, ł	L slash	0141	0142	L
46	Ĺ, ĺ	L acute	0139	013A	L
47	Ľ, ľ	L caron	013D	013E	L
48	Ļ, ļ	L cedilla	013B	013C	L
49	Ŀ, ŀ	L dot	013F	0140	L
50	Ń, ń	N acute	0143	0144	N
51	Ñ, ñ	N tilde	00D1	00F1	N
52	Ň, ň	N caron	0147	0148	N
53	Ņ, ņ	N cedilla	0145	0146	N
54	Ŋ, ŋ	Eng	014A	014B	N
55	Ø, ø	O slash	00D8	00F8	OE
56	Ó, ó	O acute	00D3	00F3	O
57	Ò, ò	O grave	00D2	00F2	O
58	Ô, ô	O circumflex	00D4	00F4	O

Sequence Number	Original characters	Description	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
59	Ö, ö	O diaeresis	00D6	00F6	OE
60	Õ, õ	O tilde	00D5	00F5	O
61	Ő, ő	O double acute	0150	0151	O
62	Ō, ō	O macron	014C	014D	O
63	Ŏ, ŏ	O breve	014E	014F	O
64	Ŕ, ŕ	R acute	0154	0155	R
65	Ř, ř	R caron	0158	0159	R
66	Ŗ, ŗ	R cedilla	0156	0157	R
67	Ś, ś	S acute	015A	015B	S
68	Ŝ, ŝ	S circumflex	015C	015D	S
69	Š, š	S caron	0160	0161	S
70	Ş, ş	S cedilla	015E	015F	S
71	Ŧ, ŧ	T bar	0166	0167	T
72	Ť, ť	T caron	0164	0165	T
73	Ţ, ţ	T cedilla	0162	0163	T
74	Ú, ú	U acute	00DA	00FA	U
75	Ù, ù	U grave	00D9	00F9	U
76	Û, û	U circumflex	00DB	00FB	U
77	Ü, ü	U diaeresis	00DC	00FC	UE
78	Ũ, ũ	U tilde	0168	0169	U
79	Ŭ, ŭ	U breve	016C	016D	U
80	Ű, ű	U double acute	0170	0171	U
81	Ů, ů	U ring	016E	016F	U
82	Ū, ū	U macron	016A	016B	U
83	Ų, ų	U ogonek	0172	0173	U
84	Ŵ, ŵ	W circumflex	0174	0175	W
85	Ý, ý	Y acute	00DD	00FD	Y
86	Ŷ, ŷ	Y circumflex	0176	0177	Y
87	Ÿ, ÿ	Y diaeresis	0178	00FF	Y
88	Ź, ź	Z acute	0179	017A	Z
89	Ž, ž	Z caron	017D	017E	Z
90	Ż, ż	Z dot	017B	017C	Z
91	Þ, þ	Thorn (Iceland)	00DE	00FE	TH
92	Æ, æ	ligature AE	00C6	00E6	AE
93	IJ, ij	ligature IJ	0132	0133	IJ
94	Œ, œ	ligature OE	0152	0153	OE
95	ß	double ss Germany		00DF	SS

Greek & Cyrillic characters - <ONLY to be used if country type detected>

Please observe that some of the transliteration rules for Cyrillic characters are conditional depending on the position of the character (or character combination) in the name. This could pose challenges for ANPR engines with some of the characters closely similar to Latin variants and could cause issues with misreads or Latin letters being incorrectly identified and transliterated incorrectly.

Sequence Number	Original characters	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
1	А, а	0410	0430	A
2	Б, б	0411	0431	B
3	В, в	0412	0432	V
4	Г, г	0413	0433	G (except Belorussian, Ukrainian and Former Yugoslav Republic of Macedonia = H)
5	Д, д	0414	0434	D
6	Е, е	0415	0435	E
7	Ё, ё	0401	0451	E (except Belorussian = IO)
8	Ж, ж	0416	0436	ZH (except Former Yugoslav Republic of Macedonia = Z)
9	З, з	0417	0437	Z
10	И, и	0418	0438	I (except Ukrainian = Y)
11	I, i	0406	0456	I
12	Й, й	0419	0439	I (except Bulgarian and 1st character in Ukrainian = Y)
13	К, к	041A	043A	K
14	Л, л	041B	043B	L
15	М, м	041C	043C	M
16	Н, н	041D	043D	N
17	О, о	041E	043E	O
18	П, п	041F	043F	P
19	Р, р	0420	0440	R
20	С, с	0421	0441	S
21	Т, т	0422	0442	T
22	У, у	0423	0443	U
23	Ф, ф	0424	0444	F
24	Х, х	0425	0445	KH (except Former Yugoslav Republic of Macedonia and Bulgaria = H)
25	Ц, ц	0426	0446	TS (except Former Yugoslav Republic of Macedonia = C)
26	Ч, ч	0427	0447	CH (except Former Yugoslav Republic of Macedonia = C)
27	Ш, ш	0428	0448	SH (except Former Yugoslav Republic of Macedonia = S)
28	Щ, щ	0429	0449	SHCH (except Bulgarian = SHT)
29	Ы ,ы	042B	044B	Y

Sequence Number	Original characters	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Standard Transliteration
30	Ъ, ъ	042A	044A	IE (Except Bulgarian = A)
31	Ь,ь	042C	044C	Y
32	Э, э	042D	044D	E
33	Ю, ю	042E	044E	IU (except Bulgarian and 1st character in Ukrainian = YU)
34	Я, я	042F	044F	IA (except Bulgarian and 1st character in Ukrainian = YA)
35	Ѵ, ѵ	0474	0475	Y
36	Ґ, ґ	0490	0491	G
37	Ў,ў	040E	045E	U
38	Ѫ, ѫ	046A	046B	U
39	Ѓ, ѓ	0403	0453	G
40	Ђ, ђ	0402	0452	D
41	Ѕ, ѕ	0405	0455	DZ
42	Ј, ј	0408	0458	J
43	Ќ, ќ	040C	045C	K (except Former Yugoslav Republic of Macedonia = KJ)
44	Љ, љ	0409	0459	LJ
45	Њ, њ	040A	045A	NJ
46	Ћ, ћ	040B	045B	C
47	Џ, џ	040F	045F	DZ (except Former Yugoslav Republic of Macedonia = DJ)
48	Є, є	0404	0454	IE (except 1st character in Ukrainian = YE)
49	Ї, ї	0407	0457	I (except 1st character in Ukrainian = YI)
50	ия			IA (only Bulgarian first names and places of birth, and only at the end of the string)

Greek characters - <ONLY to be used if country type detected>

Sequence Number	Greek characters	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Combination of Greek characters	Transcription
1	Α,Ά,α,ά (vowel)	0391/ 0386	03B1/03AC		A,A,A,A
2				(ΑΙ, αι) (8)	AI,AI
3				(ΑΙ, άι) (8)	AI,AI
4				(ΑΪ, αϊ) (8)	AI,AI
5				ΑΥ,Αυ,Αύ,αυ,αύ (3)	AV,AV,AV,AV,AV
6				ΑΥ,Αυ,Αύ,αυ,αύ (4)	AF,AF,AF,AF,AF
7				ΑΫ,Άυ,Άϋ,Αΰ,άυ,αϋ, άϋ,αΰ (9)	AY, AY, AY, AY, AY, AY, AY,AY
8	Β, β	0932	03B2		V, V
9	Γ, γ	0393	03B3		G, G
10				ΓΓ,Γγ,γγ	NG,NG,NG
11				(ΓΚ, γκ) (8)	GK,GK
12				ΓΞ,Γξ,γξ	NX,NX,NX

Sequence Number	Greek characters	UTF8 Encoding Upper Case	UTF8 Encoding Lower Case	Combination of Greek characters	Transcription
13				ΓΧ,Γχ,γχ	NCH,NCH,NCH
14	Δ, δ	0394	03B4		D,D
15	Ε,Έ,ε,έ (vowel)	0395/ 0388	03B5/ 03AD		E,E,E,E
16				(ΕΙ, ει) (8)	EI,EI
17				(ΕΙ, έι) (8)	EI,EI
18				(ΕΪ, εϊ) (8)	EI,EI
19				ΕΥ,Ευ,Εύ,ευ,εύ (3)	EV,EV,EV,EV,EV
20				ΕΥ,Ευ,Εύ,ευ,εύ (4)	EF,EF,EF,EF,EF
21				ΕΫ,Έυ,Έϋ,Εϋ,έυ,εϋ,έϋ,εϋ (9)	EY,EY,EY,EY,EY,EY,EY,EY
22	Ϋ, ϋ, ΰ	03AB	03CB/ 03B0		Y,Y,Y
23	Ζ, ζ	0396	03B6		Z,Z
24	Η,Ή,η,ή (vowel)	0397/ 0389	03B7/ 03AE		I,I,I,I
25				ΗΥ,Ηυ,Ηύ,ηυ,ηύ (3)	IV,IV,IV,IV,IV
26				ΗΥ,Ηυ,Ηύ,ηυ,ηύ (4)	IF,IF,IF,IF,IF
27				ΗΫ,Έυ,Ήϋ,Ηϋ,ήυ,ηϋ,ήϋ,ηϋ (9)	IY,IY,IY,IY,IY,IY,IY,IY
28	Θ, θ	0398	03B8		TH,TH
29	Ι,Ί,Ϊ,ι,ί,ϊ,ΐ (vowel)	0399/ 038A/ 03AA	03B9/ 03AF/ 03CA/0390		I,I,I,I,I,I,I
30	Κ, κ	039A	03BA		K,K
31	Λ, λ	039B	03BB		L,L
32	Μ, μ	039C	03BC		M,M
33				ΜΠ,Μπ,μπ (5), (7)	B,B,B
34				ΜΠ, μπ (6)	MP,MP
35	Ν, ν	039D	03BD		N,N
36				(ΝΤ, ντ) (8)	NT,NT
37	Ξ, ξ	039E	03BE		X,X
38	Ο,Ό,ο,ό (vowel)	039F/ 038C	03BF/ 03CC		O,O,O,O
39				(ΟΙ, οι) (8)	OI,OI
40				(ΟΙ, όι) (8)	OI,OI
41				(ΟΪ, οϊ) (8)	OI,OI
42				ΟΥ,Ου,Ού,ου,ού	OU,OU,OU,OU,OU
43				ΟΫ,Όυ,Όϋ,Οϋ,όυ,οϋ,όϋ,οϋ (9)	OY,OY,OY,OY,OY,OY,OY,OY
44	Π, π	03A0	03C0		P,P
45	Ρ, ρ	03A1	03C1		R,R
46	Σ, σ, ς	03A3	03C3/ 03C2		S,S,S (2)
47	Τ, τ	03A4	03C4		T,T
48	Υ,Ύ,υ,ύ (vowel)	03A5/ 038E	03C5/ 03CD		Y,Y,Y,Y
49				(ΥΙ, υι) (8)	YI,YI
50	Φ, φ	03A6	03C6		F,F
51	Χ, χ	03A7	03C7		CH,CH
52	Ψ, ψ	03A8	03C8		PS,PS
53	Ω,Ώ,ω,ώ (vowel)	03A9/ 038F	03C9/ 03CE		O,O,O,O

Notes on the "Transcription table" above:

(2) – The Greek character ς (sigma final) is transcript into Latin s, the same as for the Greek character σ (sigma). The character σ is used at the beginning or the middle of a word, while the character ς is used at the end of the word.
(3) – Used before the characters β, γ, δ, ζ, λ, μ, ν, ρ, Β, Γ, Δ, Ζ, Λ, Μ, Ν, Ρ and all the vowels.
(4) – Used before the characters θ, κ, ξ, π, σ, ς, τ, φ, χ, ψ, Θ, Κ, Ξ, Π, Σ, Τ, Φ, Χ, Ψ and at the end of the word.
(5) – At the beginning of the word.
(6) – In the middle of the word. A character or group of characters, which is not at the beginning or the end of a word, is in the middle of a word.
(7) – At the end of the word.
(8) – The combinations of Greek characters, which are in parentheses, are presented in table 10 only for clarification. They are converted according to the provisions laid down for each independent character.
(9) – They are converted according to the provisions laid down for each independent character when the vowel υ has an accent (e.g. ύ) or when the υ has dialytika (e.g. ϋ).

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