

French Dual Calendar Cube Mapping

In the mapping process of a calendar cube texture, all stickers are numbered from 0 to 53 as shown on the reference 3x3x3 numbered cube below. By doing so, each letter, number and blank of any calendar cube texture can be uniquely identified. The result of the mapping process is used as an input to the [CubeSynthesizer3](#) computer program, which will then synthesize all the 2562 algorithms used to animate this perpetual calendar.

Many animated calendar cubes can be found by browsing through pages of website:

http://www.randelshofer.ch/rubik/virtualcubes/virtual_rubik_en.html

French Dual Calendar Cube			
French Dual Calendar Cube Original design 2010 by Stefan Berinde Copyright © 2010 Walter Randelshofer Werner Randelshofer All rights reserved.	6 manche 1 C A Vendre Same manche Lun di Mar 9 2 10 1 4 7 11 3 3 1 2 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	Copyright © 2010 Walter Randelshofer Werner Randelshofer All rights reserved.	
Texture		Wednesday, December 10	
Synthesized Algorithm			
Wednesday, December 10 CU2 R' B' R D' B' D R' MF R U' MF' B U L MF L'			
Reference 3x3x3 Numbered Cube			
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	
Numbered Cube Texture		Virtual Numbered Cube	

French Dual Calendar Cube Mapping – Weekdays

Letters						Weekdays	
Left	Numbering	Middle	Numbering	Right	Numbering	Weekday	Numbering
Di	29	manche	25	b2	2	Sunday	0
Lun	0	di	1	b2	2	Monday	1
Mar	9	di	1	b11	11	Tuesday	2
Mercr	45	di	1	b2	2	Wednesday	3
Jeu	20	di	1	b2	2	Thursday	4
Vendre	24	di	1	b2	2	Friday	5
Same	26	di	1	b11	11	Saturday	6

Note 1: Weekday numbering begins with Sunday (for compatibility with JavaScript Date coding)

French Dual Calendar Cube Mapping – Months

Letters						Months	
Left	Numbering	Middle	Numbering	Right	Numbering	Month	Numbering
J	3	A	4	N	5	January	0
F	48	E	49	V	50	February	1
M	14	A	4	R	32	March	2
A	23	V	40	R	32	April	3
M	14	A	4	I	21	May	4
J	3	U	13	N	5	June	5
J	3	U	13	L	10	July	6
A	23	O	31	U	39	August	7
S	28	E	49	P	16	September	8
O	41	C	22	T	34	October	9
N	5	O	31	V	50	November	10
D	30	E	49	C	12	December	11

French Dual Calendar Cube Mapping – Days

Left	Numbering	Middle	Numbering	Right	Numbering	Day	Numbering
b6	6	b7	7	1	8	1	1
b6	6	b7	7	2	53	2	2
b6	6	b7	7	3	44	3	3
b6	6	b7	7	4	15	4	4
b6	6	b7	7	5	27	5	5
b33	33	b7	7	6	36	6	6
b6	6	b7	7	7	17	7	7
b6	6	b7	7	8	42	8	8
b6	6	b7	7	9	18	9	9
b33	33	1	52	0	35	10	10
b6	6	1	52	1	8	11	11
b6	6	1	52	2	53	12	12
b6	6	1	52	3	44	13	13
b6	6	1	52	4	15	14	14
b6	6	1	52	5	27	15	15
b33	33	1	52	6	36	16	16
b6	6	1	52	7	17	17	17
b6	6	1	52	8	42	18	18
b6	6	1	52	9	18	19	19
b33	33	2	37	0	35	20	20
b6	6	2	37	1	8	21	21
b6	6	2	37	2	53	22	22
b6	6	2	37	3	44	23	23
b6	6	2	37	4	15	24	24
b6	6	2	37	5	27	25	25
b33	33	2	37	6	36	26	26
b6	6	2	37	7	17	27	27
b6	6	2	37	8	42	28	28
b6	6	2	37	9	18	29	29
b33	33	3	43	0	35	30	30
b6	6	3	43	1	8	31	31

Note 2: Blank b33 left is used with numbers 0, 6 right

The screenshot displays the CubeSynthesizer3 application, which is a Microsoft Excel-based tool for generating cube algorithms. The interface is divided into several sections:

- Top Menu Bar:** Includes standard Excel menus like 'Accueil', 'Insertion', 'Mise en page', 'Formules', 'Données', 'Révision', 'Affichage', 'Développeur', and 'Acrobat'.
- Left Panel:** Contains a list of 2562 algorithms, with the first few visible: 'CubeSynthesizer3 - 3x3x3 Cubes - Developer's Version 1.1', 'French Dual Calendar Cube - (C) 2009 - 2010 www.mementoslangues.fr', and '2562 Algorithms Synthesized'.
- Main Table:** A table with columns for 'Index', 'Moves', 'Weekdays', 'Days', and 'Months'. It lists 2562 algorithms, each with a unique move sequence and associated day and month.
- Dialog Box:** A 'Cube Synthesizer Inp...' dialog box is open, showing options for 'Calendar Cubes', 'Languages' (French - Dual is selected), and 'Algorithm' (JavaScript is selected).

Design Notes

French calendar

French Calendar				
Months			Weekdays	
English	French		English	French
January	<u>JAN</u> vier	Janvier	Monday	Lundi
February	<u>FEV</u> rier	Février	Tuesday	Mardi
March	<u>MAR</u> s	Mars	Wednesday	Mercredi
April	<u>AVR</u> il	Avril	Thursday	Jeudi
May	<u>MAI</u>	Mai	Friday	Vendredi
June	<u>JUIN</u>	Juin	Saturday	Samedi
July	<u>JUILL</u> et	Juillet	Sunday	Dimanche
August	<u>AOU</u> t	Août		
September	<u>SEP</u> tembre	Septembre		
October	<u>OCT</u> obre	Octobre		
November	<u>NOV</u> embre	Novembre		
December	<u>DEC</u> embre	Décembre		
8 letters on Middle Left edge cubes			J F M A S O N D	
6 letters on Middle Center cubes			A E V U O C	
9 letters on Middle Right edge cubes			N V R I L U P T C	
Letters 'O', 'N' and 'I' can be used either Middle Left or Middle Right				

Top Layer – Weekdays

3 corners: (Lun, Vendre, Di), (Mar, Same, blank2), (Mercre, Jeu, blank11)

2 edges: (di, manche), (di, manche)

Middle Layer – Months

6 true centers: (A, E, V, U, O, C)

8 edges: (J, R), (N, C), (L, A), (I, S), (U, T), (O, P), (F, M), (D, V)

Bottom Layer – Days

5 corners: (0, 6, blank6), (2, 8, blank33), (1, 4, blank38), (5, 9, blank47), (3, 7, blank51)

2 edges: (1, 3), (2, blank7)

All Layers

Corners = $3 + 5 = 8$ ---- OK

Edges = $2 + 8 + 2 = 12$ ---- OK

True centers = 6 ---- OK

Blanks

blank2: can't be used with weekdays beginning with Mar, Same

blank11: can't be used with weekdays beginning with Mercre, Jeu

Hint: Use blank11 for Mar, Same and blank2 for all other weekdays

blank7: can't be used with days beginning with 2

Hint: none

blank6: can't be used with days ending with 0, 6

blank33: can't be used with days ending with 2, 8

blank38: can't be used with days ending with 1, 4

blank47: can't be used with days ending with 5, 9

blank51: can't be used with days ending with 3, 7

Hint: Use blank33 for days ending with 0, 6 and blank6 for all other days