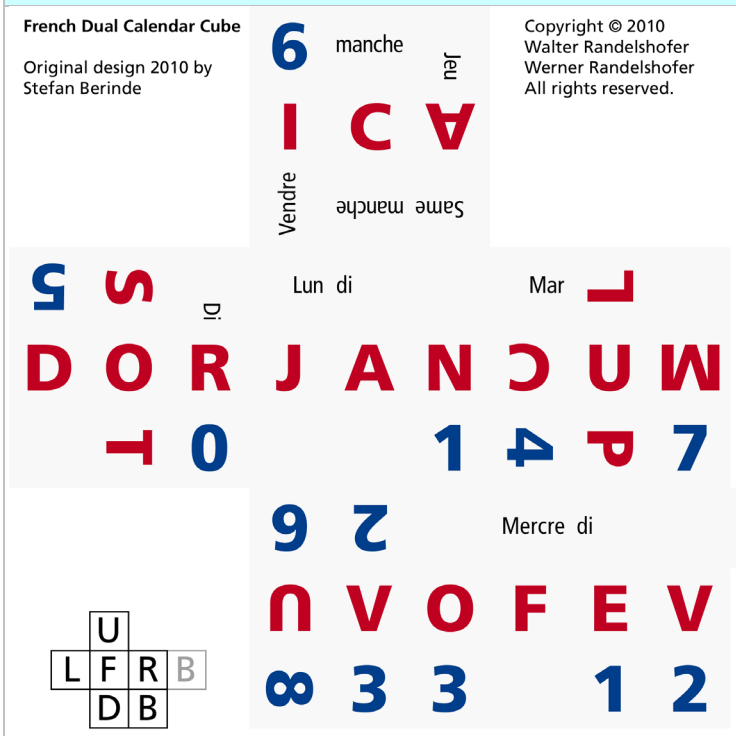
French Dual Calendar Cube Mapping

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



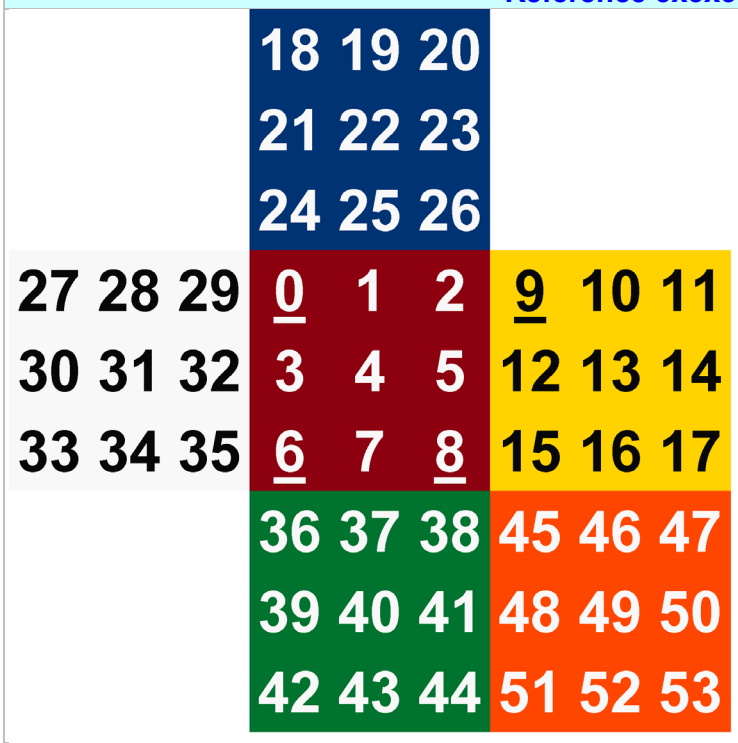
Texture

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

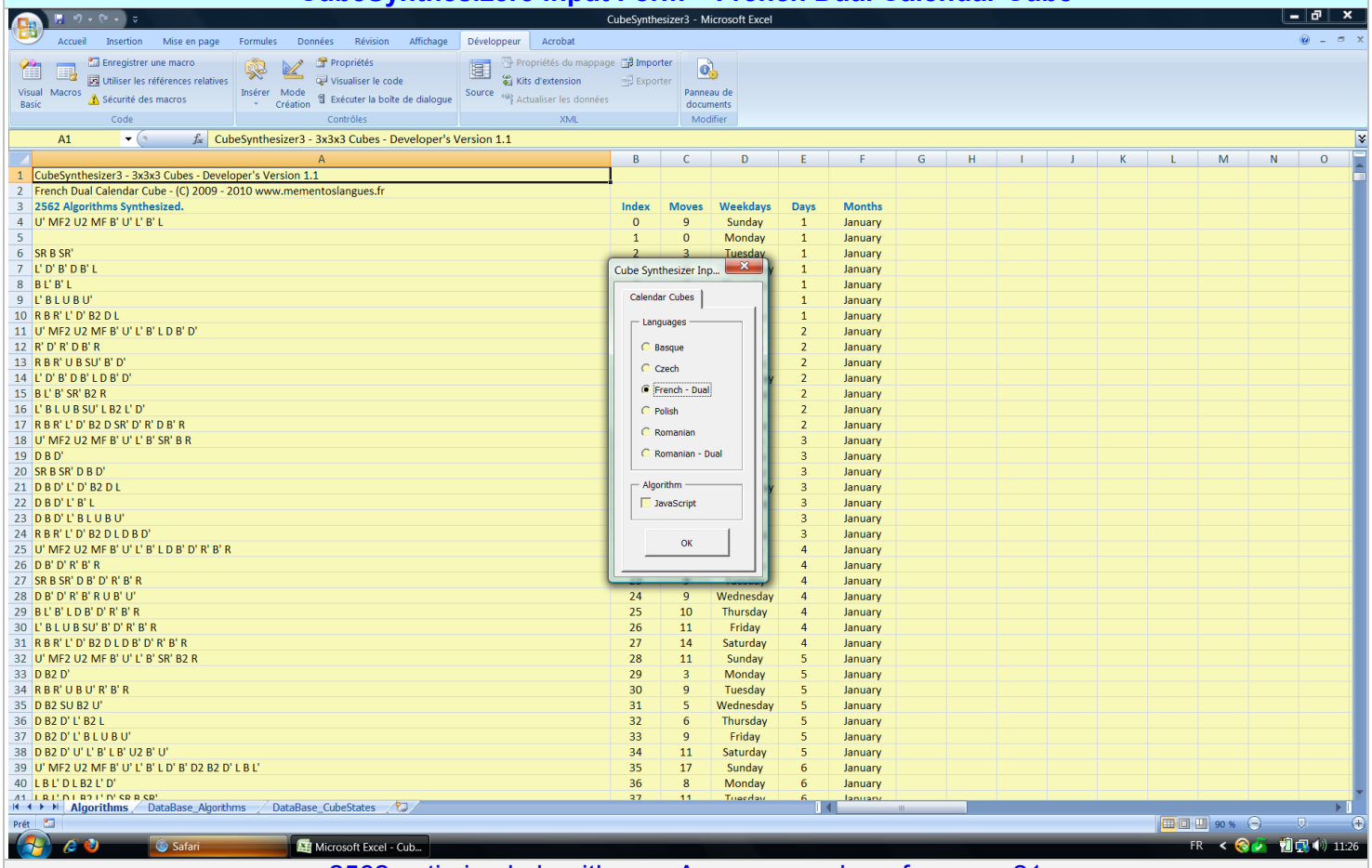


Numbered Cube Texture

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
Mercre	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							

CubeSynthesizer3 Input Form – French Dual Calendar Cube



2562 optimized algorithms – Average number of moves: 21

Design Notes

French calendar

French Calendar				
Months			Weekdays	
English	French		English	French
January	JANvier	Janvier	Monday	Lundi
February	FEVrier	Février	Tuesday	Mardi
March	MARs	Mars	Wednesday	Mercredi
April	AVRil	Avril	Thursday	Jeudi
May	MAI	Mai	Friday	Vendredi
June	JUiN	Juin	Saturday	Samedi
July	JUiLlet	Juillet	Sunday	Dimanche
August	AOUt	Août		
September	SEPtembre	Septembre		
October	OCTobre	Octobre		
November	NOVembre	Novembre		
December	DECembre	Décembre		
8 letters on **M**iddle **L**eft edge cubes			J F M A S **O** **N** D	
6 letters on **M**iddle **C**enter cubes			A E V U O C	
9 letters on **M**iddle **R**ight edge cubes			**N** V R **I** L U P T C	
Letters '**O**', '**N**' and '**I**' can be used either **M**iddle **L**eft or **M**iddle **R**ight				

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