# 



Marseille, 17.5.2018

# **Painting by Numbers**

An Update

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### Matrix visualising aggregatable IPv6-Ranges (8 Bit)

00	01	04	05	10	11	14	¦ 15	40	41	44	45	50	51	54	55
02	03	06	07	12	13	16	17	42	43	46	47	52	53	56	57
08	09	0C	OD	18	19	1C	1D	48	49	4C	4D	58	59	5C	5D
0A	0 <b>B</b>	0 <b>E</b>	0 <b>F</b>	1A	1B	1E	1F	4Ā	4B	4E	4F	5A	5 <b>B</b>	5 <b>E</b>	5F
20	21	24	25	30	31	34	35	60	61	64	65	70	71	74	75
22	23	26	27	32	33	36	37	62	63	66	67	72	73	76	77
28	29	2C	2D	38	39	3 <b>C</b>	3 <b>D</b>	68	69	6C	6D	78	79	7C	7D
2A	2 <b>B</b>	2E	2F	3 <b>A</b>	3 <b>B</b>	3 <b>E</b>	3 <b>F</b>	6Ā	6 <b>B</b>	6 <b>E</b>	6 <b>F</b>	7A	7B	7E	7F
80	81	84	85	90	91	94	95	C0	C1	C4	<b>C</b> 5	D0	D1	D4	<b>D</b> 5
82	83	86	87	92	93	96	97	C2	СЗ	C6	<b>C7</b>	D2	D3	D6	D7
88	89	8C	8D	98	99	9 <b>C</b>	9 <b>D</b>	C8	C9	СС	CD	D8	<b>D</b> 9	DC	DD
8A	8 <b>B</b>	8 <b>E</b>	8 <b>F</b>	9A	9 <b>B</b>	9E	9 <b>F</b>	CĀ	СВ	CE	CF	DA	DB	DE	DF
A0	A1	A4	<b>A</b> 5	В0	B1	В4	<b>B</b> 5	E0	E1	E4	<b>E</b> 5	F0	F1	F4	F5
A2	А3	<b>A</b> 6	A7	B2	В3	<b>B</b> 6	В7	Ē2	<b>E</b> 3	<b>E</b> 6	E7	F2	F3	F6	F7
<b>A8</b>	A9	AC	AD	<b>B</b> 8	<b>B</b> 9	ВС	BD	<b>E</b> 8	<b>E</b> 9	EC	ED	F8	F9	FC	FD
AA	АВ	AE	AF	ВА	ВВ	BE	BF	ĒĀ	ЕВ	EE	EF	FA	FB	FE	FF
				_		_									



### Matrix visualising aggregatable IPv6-Ranges (8 Bit)

Coloured squares as examples for different network sizes

2001:0DB8:1600::/40 violet

2001:0DB8:0600::/39

2001:0DB8:2000::/38

2001:0DB8:3800::/37 light-green

2001:0DB8:8000::/36

2001:0DB8:4000::/35

2001:0DB8:C000::/34

2001:0DB8:8000::/33

2001:0DB8:0000::/32

orange

dark-green

red

vellow

blue

lower half

whole adress-space



### Matrix visualising aggregatable IPv6-Ranges (8 Bit)

00	¦ 01	04	05	10	11	14	15	40	41	44	45	50	51	54	55
02	03	06	07	12	13	16	17	42	43	46	47	52	53	56	57
80	09	0C	0D	18	19	1C	1D	48	49	4C	4D	58	59	5C	5D
0A	0 <b>B</b>	0E	0 <b>F</b>	1A	1B	1E	1F	4A	4B	4E	4F	5A	5 <b>B</b>	5 <b>E</b>	5F
20	21	24	25	30	31	34	35	60	61	64	65	70	71	74	75
22	23	26	27	32	33	36	37	62	63	66	67	72	73	76	77
28	29	2C	2D	38	39	3C	3 <b>D</b>	68	69	6C	6 <b>D</b>	78	79	7C	7D
2A	2B	2E	2F	3A	3 <b>B</b>	3E	3F	6Ā	6 <b>B</b>	6 <b>E</b>	6 <b>F</b>	7A	7B	7E	7F
80	81	84	85	90	91	94	95	CO	C1	C4	C5	DO	D1	D4	D5
82	83	86	87	92	93	96	97	C2	C3	C6	<b>C7</b>	D2	D3	D6	D7
88	89	8C	8D	98	99	9C	9 <b>D</b>	C8	C9	СС	CD	D8	D9	DC	DD
8A	8B	8E	8F	9A	9 <b>B</b>	9 <b>E</b>	9 <b>F</b>	CA	СВ	CE	CF	DA	DB	DE	DF
Α0	A1	<b>A</b> 4	<b>A</b> 5	ВО	B1	В4	<b>B</b> 5	EO	E1	E4	<b>E</b> 5	FO	F1	F4	F5
A2	А3	A6	<b>A7</b>	B2	В3	В6	В7	E2	<b>E</b> 3	E6	E7	F2	F3	F6	F7
<b>A8</b>	A9	AC	AD	<b>B</b> 8	В9	ВС	BD	E8	<b>E</b> 9	EC	ED	F8	F9	FC	FD
AA	AB	ΑĒ	AF	BA	ВВ	BE	BF	EA	EB	EE	EF	FA	FB	FE	FF



### Matrix visualising aggregatable IPv4-Ranges (8 Bit)

0	<u> </u>	4	5	16	17	20	21	64	65	68	69	80	81	84	85
2	3	6	7	18	19	22	23	66	67	70	71	82	83	86	87
8	9	12	13	24	25	28	29	72	73	76	77	88	89	92	93
10	11	14	15	26	27	30	31	74	75	78	79	90	91	94	95
32	33	36	37	48	49	52	53	96	97	100	101	112	113	116	117
34	35	38	39	50	51	54	55	98	99	102	103	114	115	118	119
40	41	44	45	56	57	60	61	104	105	108	109	120	121	124	125
42	43	46	47	58	59	62	63	106	107	110	111	122	123	126	127
128	129	132	133	144	145	148	149	192	193	196	197	208	209	212	213
130	131	134	135	146	147	150	151	194	195	198	199	210	211	214	215
136	137	140	141	152	153	156	157	200	201	204	205	216	217	220	221
138	139	142	143	154	155	158	159	202	203	206	207	218	219	222	223
160	161	164	165	176	177	180	181	224	225	228	229	240	241	244	245
162	163	166	167	178	179	182	183	226	227	230	231	242	243	246	247
168	169	172	173	184	185	188	189	232	233	236	237	248	249	252	253
170	171	174	175	186	187	190	191	234	235	238	239	250	251	254	255



### Matrix visualising aggregatable IPv4-Ranges (8 Bit)

Coloured squares as examples for different network sizes

172.16.22.0/24 or 10.22.0.0/16 violet 172.16.6.0/23 or 10.6.0.0/15 orange 172.16.32.0/22 or 10.32.0.0/14 dark-green 172.16.56.0/21 or 10.56.0.0/13 light-green 172.16.128.0/20 or 10.128.0.0/12 red 172.16.64.0/19 or 10.64.0.0/11 yellow 172.16.192.0/18 or 10.192.0.0/10 blue 172.16.128.0/17 or 10.128.0.0/9 lower half 172.16.0.0/16 or 10.0.0.0/8 whole adress-space

Helge Holz: Painting by Numbers



### Weblinks

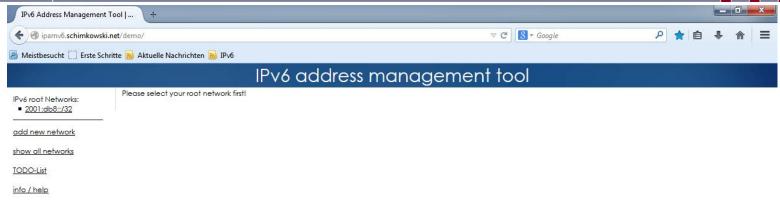
ipamv6.schimkowski.net

ipamv6.schimkowski.net/demo

0

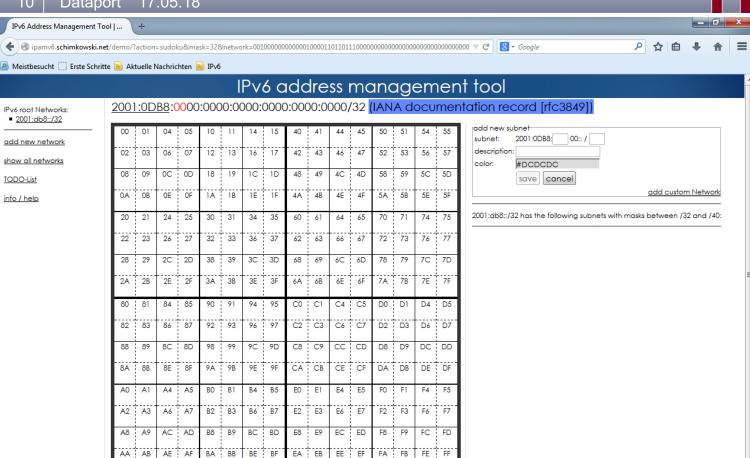
#### Dataport 17.05.18



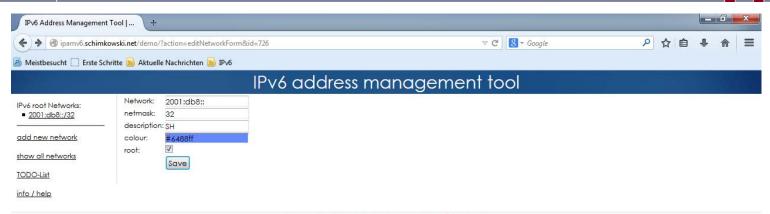


Conncept by Helge Holz developed by Helmut Schimkowski



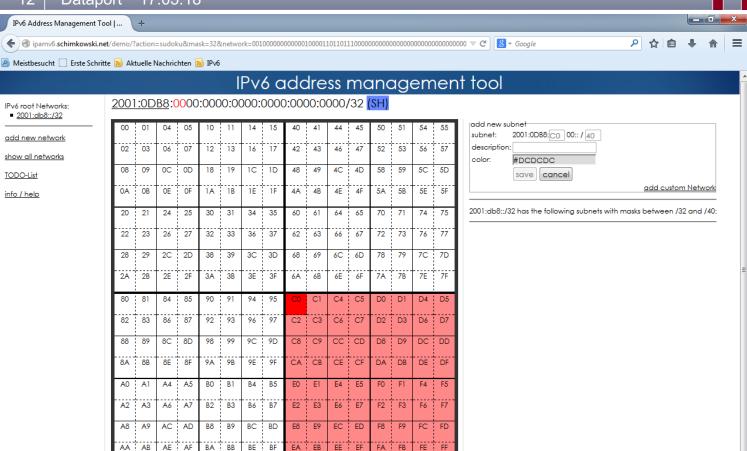




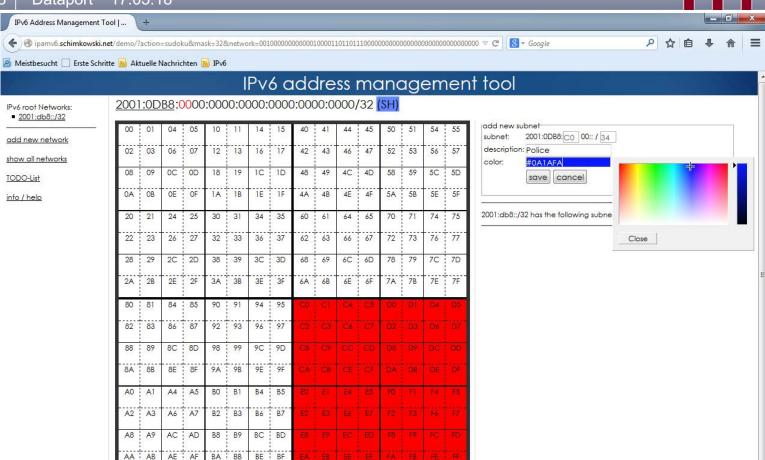


Conncept by Helge Holz developed by Helmut Schimkowski

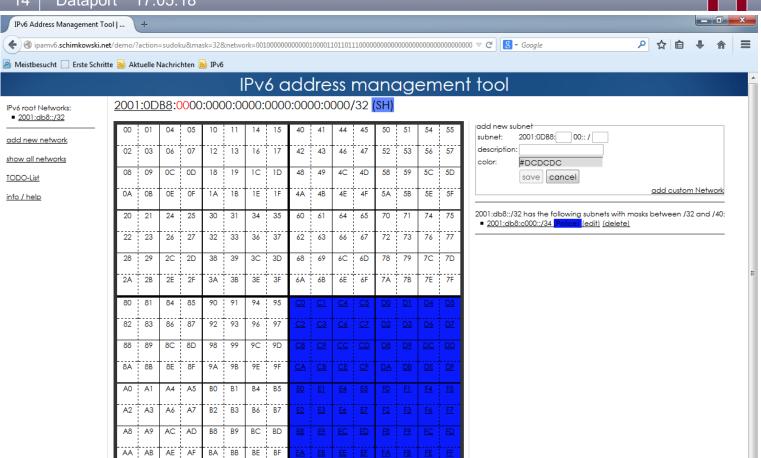


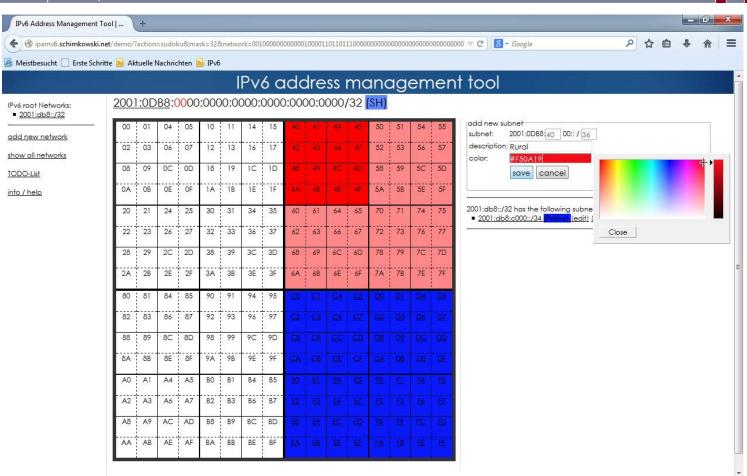




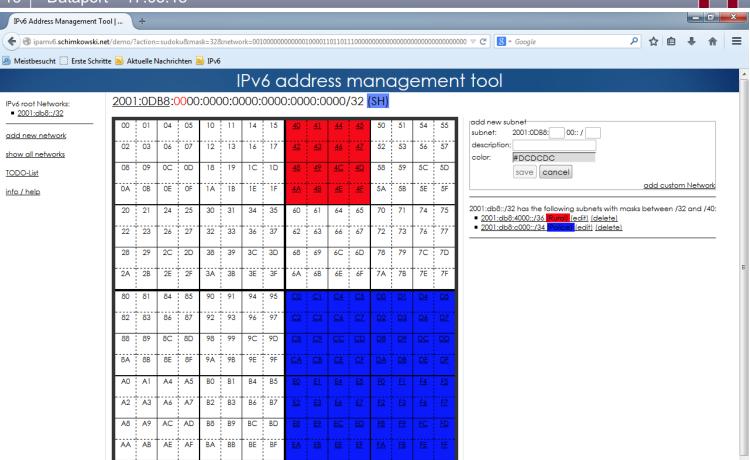




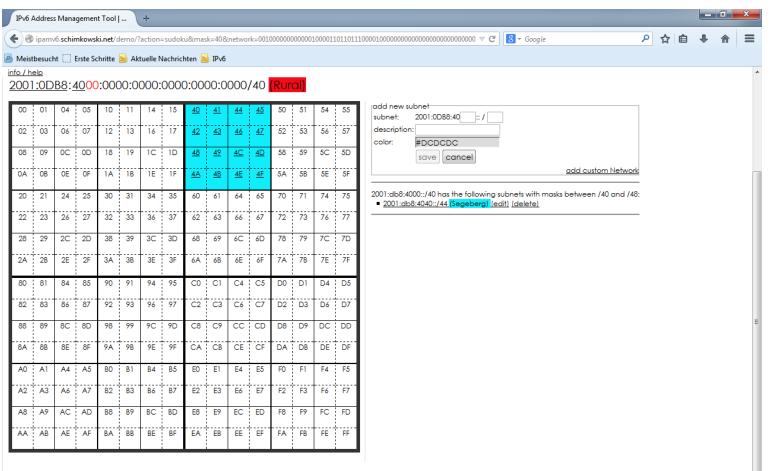




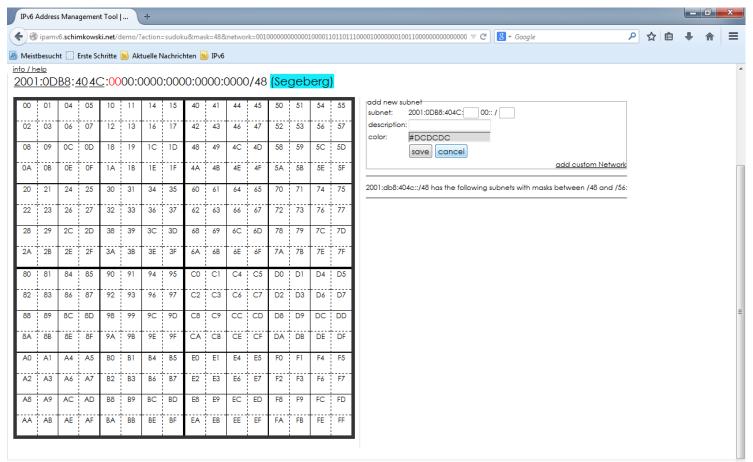




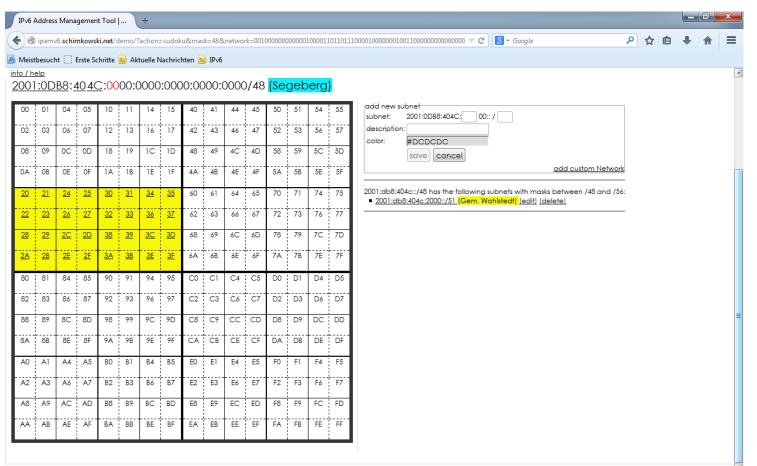




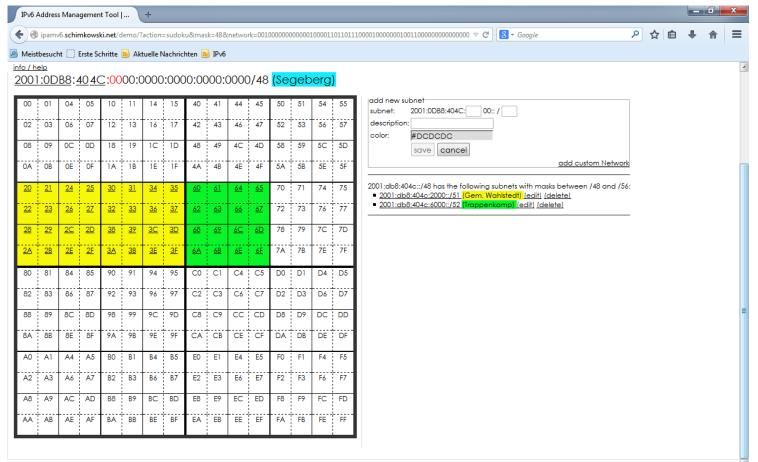




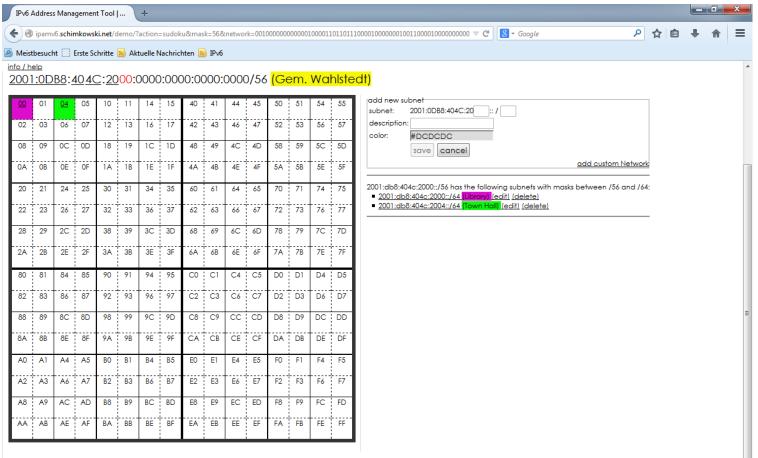














# Do we need a program like this?



## First thougts: no

- Nobody who can write address-plans needs it
- Nobody who needs this program should write address-plans



# Second thoughts: Yes!



# **Advantages**

- The resulting address-plan is structured
- You are able to explain it
- You can adjust easyly to new challenges



# Disadvantage

- You may get the illusion: structure is everything
- You still have to think about the why and what
- It's much easier to criticize such an address-plan



### **Questions?**