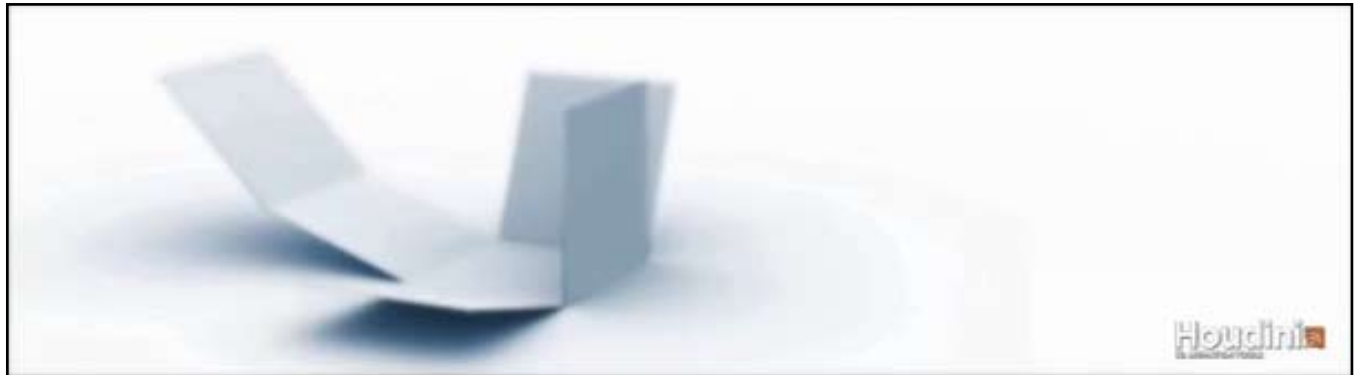


# Georg Duemlein

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*Houdini TD Generalist*



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<http://www.preset.de/>

## Resume

### Selected Engagements

since 09.2007	University Teaching Position at RFH Cologne Maya: 3D-Design and Animation
09.2006 - 05.2007	Schenker Deutschland AG Generalist: Visualisation for In-House Communication
08.2006	Digital Experience Design, München Research & Development: Swarming Algorithms
07.2006	Dr. med. Neumann, Münster medical visualisation
12. 2005 - 02. 2006	Spielraum GmbH, München Technical Director: 3D to Flash Pipeline
10.2005 - 11 . 2005	Kohlhaas & Kohlhaas GbR, Weimar Technical Designer xHTML- Flash-Interfaces
2005 & 2006	Jugend Kunst Schule Biberach children workshops
06. 2005 - 09. 2005	Ingenieurgruppe BEB GmbH, Tröbsdorf Generalist & Pipeline Development
2005	KI.KA., Erfurt (German Children's Television) Development of Flash-Interfaces and Pipeline
2001 - 2005	Hitachi High-Technologies, München Design and Development for English and Chinese CMS and Website
1998	Project „HSP/III Mambo“, Weimar Design & Pipeline for an interactive VRML sewage treatment plant
1998	WOB AG, Viernheim Generalist: Animation for IBM/S390 Roadshow 1998



## Education

2007	Vizy Acky Houdini Online Classes Garman's Visual Effects Academy, Texas
2002	diploma in product design Bauhaus University Weimar
1997 - 2002	student of product design (focus: human machine interaction) Bauhaus University Weimar
1996 - 1999	student of media studies Bauhaus University Weimar (no degree)

## Languages

German	native
English	fluent

## Software Skills

SideEffects Houdini	2007
Autodesk 3D Studio MAX	1995 - 2007
Adobe AfterEffects	2000 - 2007
Maya	1998 - 2000, 2007
Softimage XSI	2000
Combustion	2000 - 2002
Shake	2000

## Recommendations

“Georg Duemlein has been a student in my Procedural Modelling for Special Effects class (vol210) and created some excellent work. He has found very clever and unusual ways of creating effect animations and is very good at explaining the process he used to make these. For me, this is a mark of a good teacher, one who is always looking for new solutions and able to explain the process.”

Garman Herigstad, VizyAcky

garman@vizyacky.com, Phone: 469-374-9975

June 27, 2007

About the Colour Cube HDA:

“A remarkable piece of work. Thanks for sharing. [...]”

Being able to demonstrate your understanding of Houdini with this sort of clarity is far superior to yet another alien monster, fancy car or spaceship”

Peter Robbinson, Sidefx, probbins@sidefx.com

June 27, 2007

“Georg provides a great avenue of learning for Houdini. He does remarkably fascinating research regarding colour and form using Houdini.”

Peter Robbinson, Sidefx, probbins@sidefx.com

December 7, 2007

“[F]rom following your posts, you have already amassed a great deal of Houdini knowledge. Keep it up and in no time, you will be an expert. You already know more than more than a lot of Houdini users out there. You are on the right path.”

Jeff Wagner, Side Effects Support Department

April 23, 2007

“I worked with Georg on several occasions during my career in Germany. At the first job he helped me with several sophisticated 3D graphic designs and renderings for a fashion collection at Bording Sportswear in Heidelberg. Later on I also contracted his services for a IBM road show design, where he created a several minutes long 3D film that was aired on several workstations throughout the event. Georg is very reliable, fast, professional and always a good laugh to work with. I will work with him anytime again if I have a suitable project.”

Dirk Eschenbacher, Executive Creative Director at Tribal DDB

December 20, 2007

## 1: Like An Elephant in a Colour Cube



This is one of my very first Houdini Shots.

I modelled the elephant originally in 3D Studio MAX using the box modelling technique.

For this effect the model was exported as OBJ and imported into Houdini.

The rigged model is used as bounding box volume in a groupSOP and feed into a colour cube.

Related Work:

Gang of Four

[http://www.preset.de/showpic.php?pic=/\\_gfx/q2\\_2005/rdg-designlabel\\_tiere\\_lrg.jpg](http://www.preset.de/showpic.php?pic=/_gfx/q2_2005/rdg-designlabel_tiere_lrg.jpg)

Color Cube HDA

<http://www.preset.de/2007/0323/colorcube/>

HSV Cylinder HDA

<http://www.preset.de/2007/0417/color-cylinder-001/>

## 2: RDG Generic House HDA - abstract central-European houses



This Houdini Digital Asset generates abstract central-European houses.

Building Volumes (“Baumassen”) are usually used in architectural models and visualisations to represent the volume of buildings. They are often made of simple cubes.

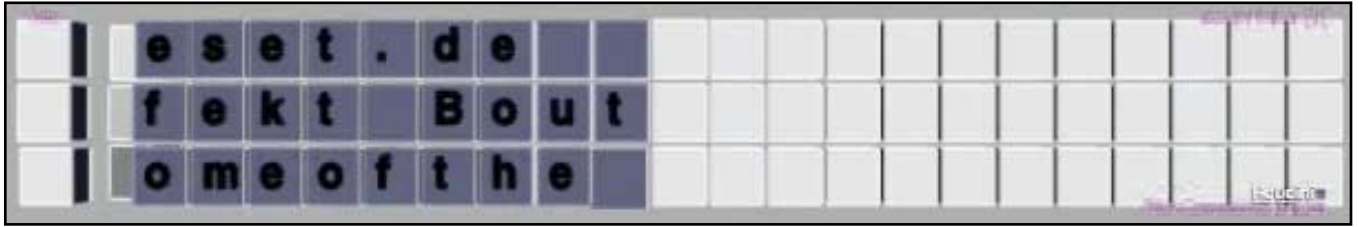
For this shot a variety of houses is generated by a copySOP (village generator) that can optionally read point attributes to control house type and colour. The village is blown apart by a fan in DOPs.

Composited in Houdini.

Documentation:

<http://www.preset.de/2007/0412/village-001/>

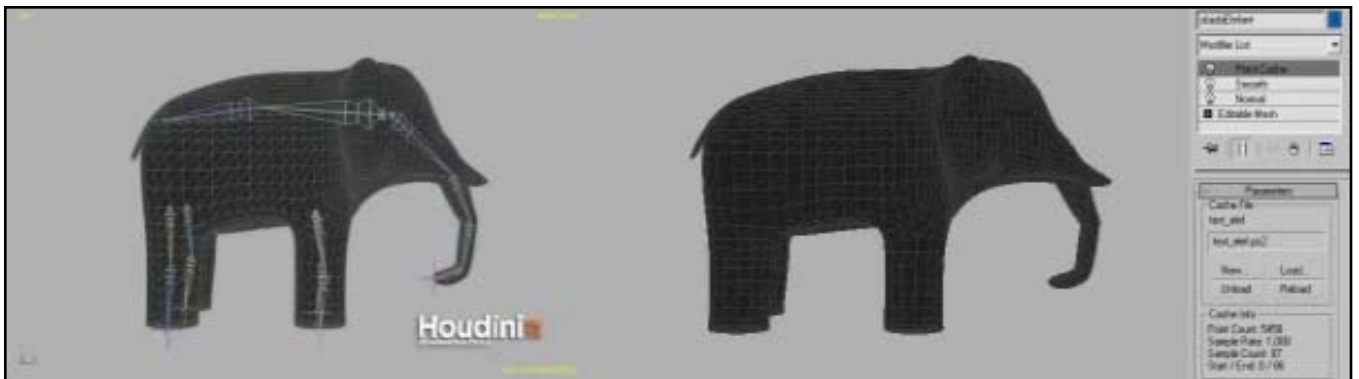
### 3: font cubes - look ma' - no particles!



This shot is from the series “growing stuff”.  
A string feed to the system is picked up by the boxes.

The animation can be controlled by helper objects that define the range of visible letters.

### 4: Houdini to 3DSmax point cache



A maxscript that generates pc2 Pointcache files to playback Houdini animated/rigged objects in 3dsmax.  
The left elephant is rigged in Houdini and exported as a numbered OBJ sequence. The right elephant is the first OBJ imported in 3D Studio MAX. A point cache (pc2) was generated from the OBJ Sequence and applied to the model.

This allows the economic exchange of Geometry with non-changing topology.

## 5: Something Growing

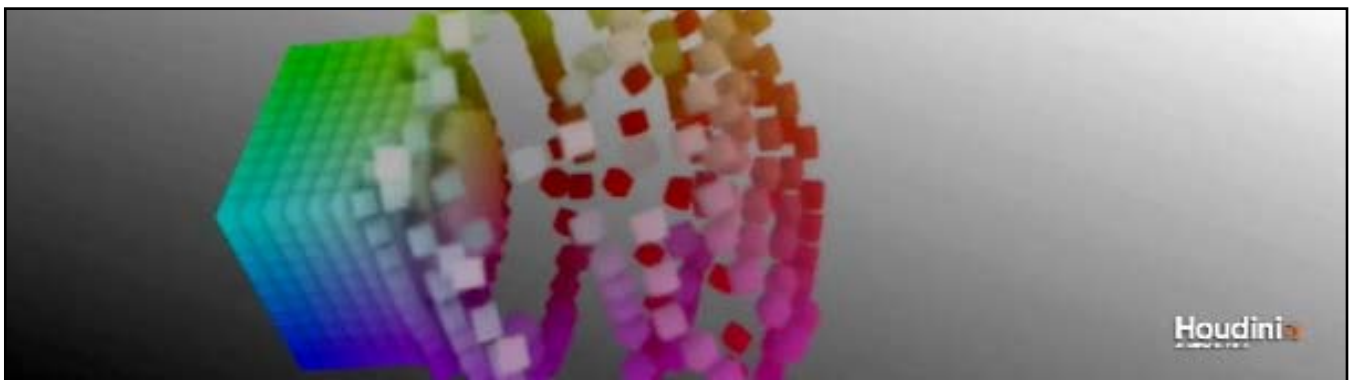


This shot is from the series: “growing stuff”.

The branches are generated by particles that deform lineSOP. A library of branches was saved to disk and can now be used to build different trees. Each tree offers a slider with the range 0..1 to control the growth.

This slider can be linked to a “where am I in cam HDA” to ensure the trees only grow if visible to the camera.

## 6: Colour Cube Peeling (cont.)



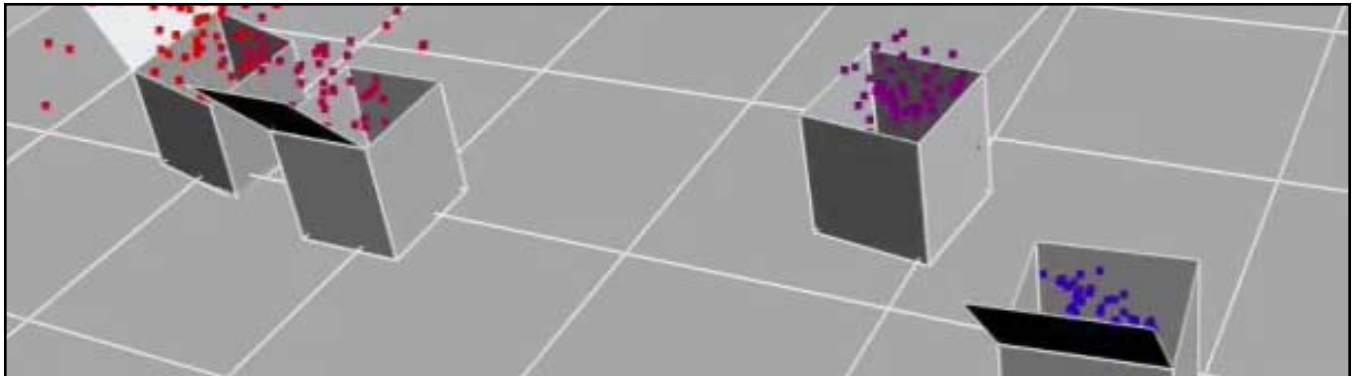
This shot shows the choreographed peeling of a colour cube. Different groups are animated and a POPnetwork uses this information to start the interaction of the particles.

Composited in Houdini.

Related:

[http://www.preset.de/\\_gfx/\\_mov/str\\_2-1.mp4](http://www.preset.de/_gfx/_mov/str_2-1.mp4)

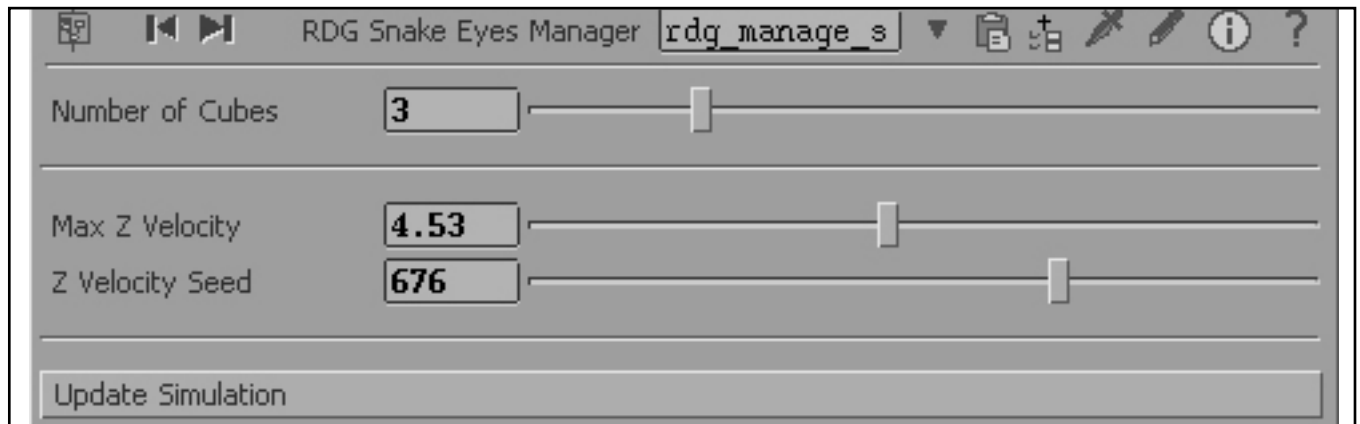
## 7: Pandora's Snake Eyes



The setup drops an arbitrary number of boxes.

If a box comes to rest it opens and starts to emit particles.

The orientation is determined in on-the-fly based on the DOP simulation just like the time when the box stops moving. The animator can concentrate on the look of the animation without bothering when to start which effect where ...



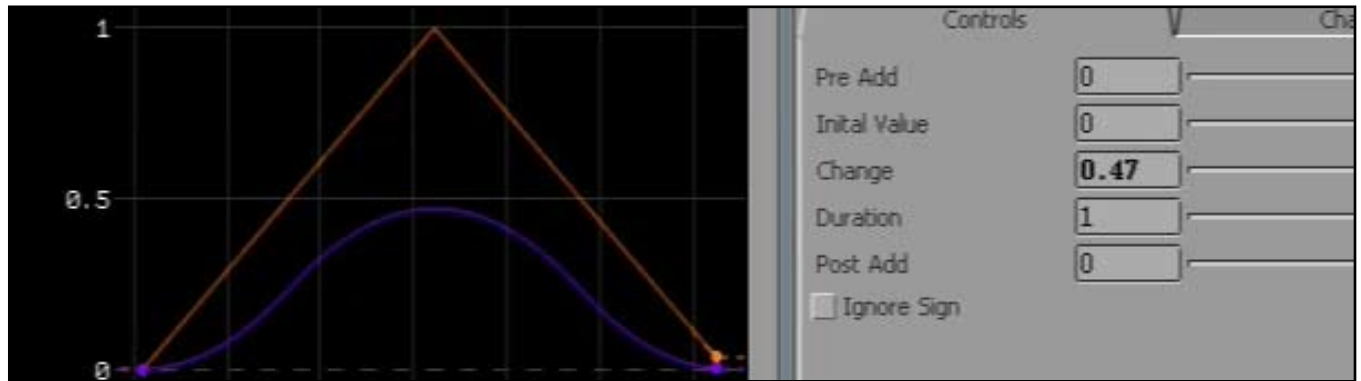
This is the WIP interface: It offers access to the number of cubes and a randomised upwards movement of the cubes before they start to drop.

Related

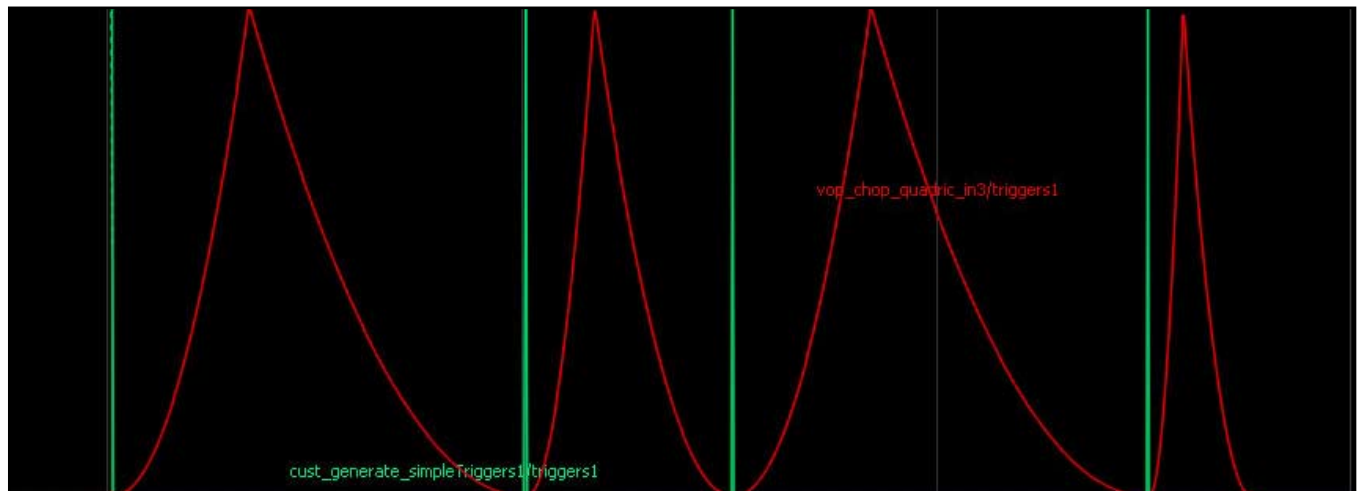
<http://proforma.preset.de/tai-chi-hou-dini/pandora/>

<http://forums.odforce.net/index.php?showtopic=5260>

## 10: VEX Easing CHOP

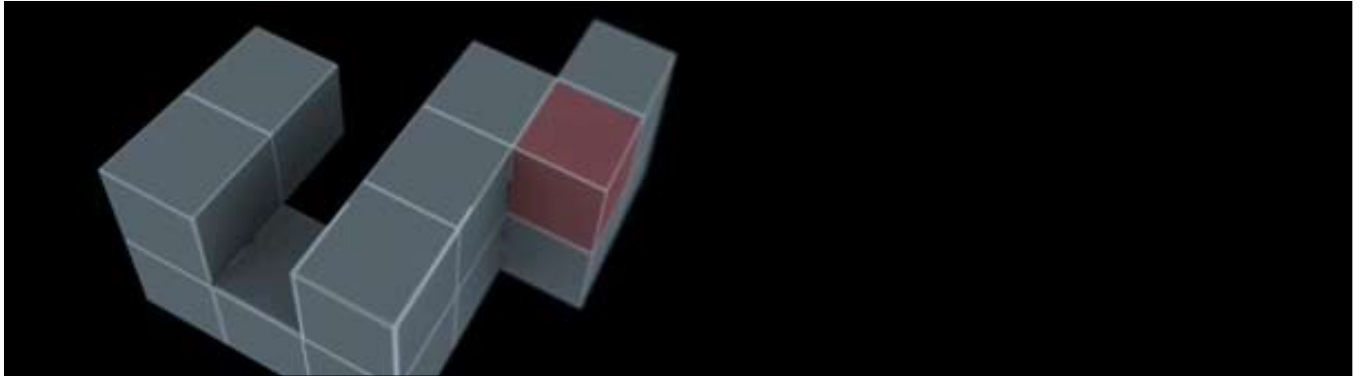


This VEX CHOP easens linear curves.



In this image the green triggers are the input curve. The red interpolation is generated on the fly.

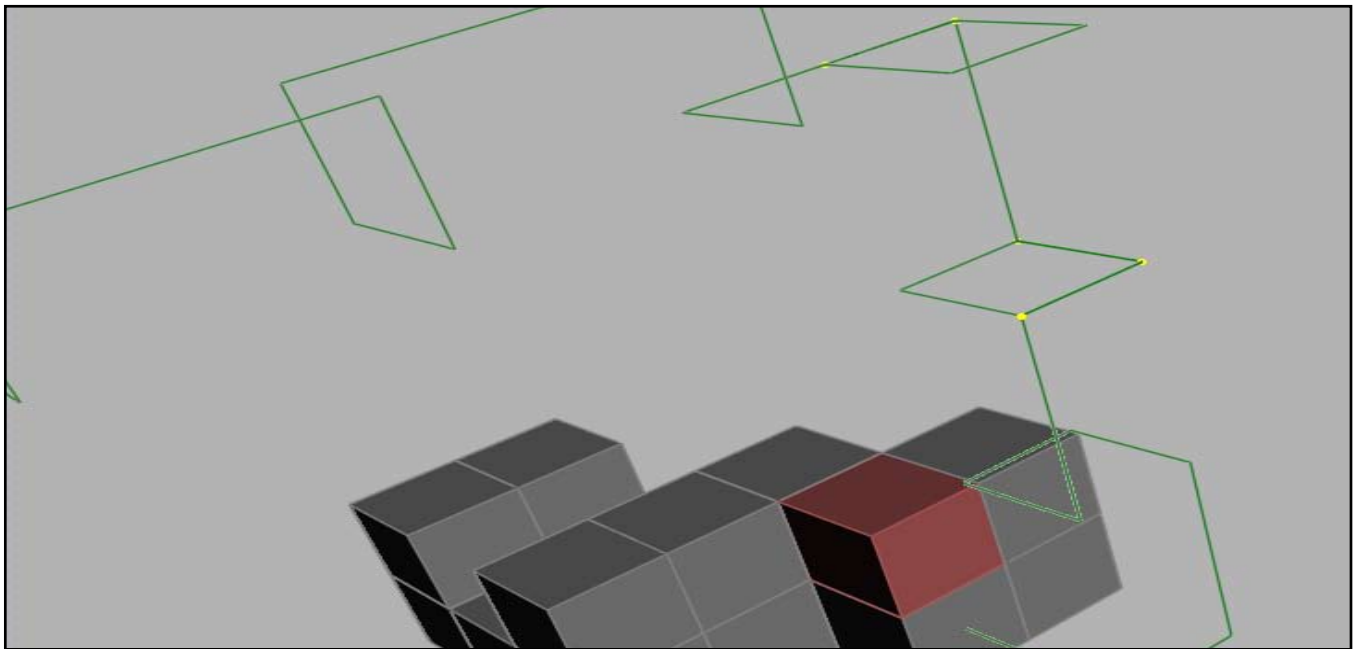
## 11: Cubic Growth



This System uses an arbitrary input curve to grow the cubes.

In this example the curve was generated by a L-System.

Normals and Up vectors for the copySOP calculated in pointSOPs by shifting the point numbers.



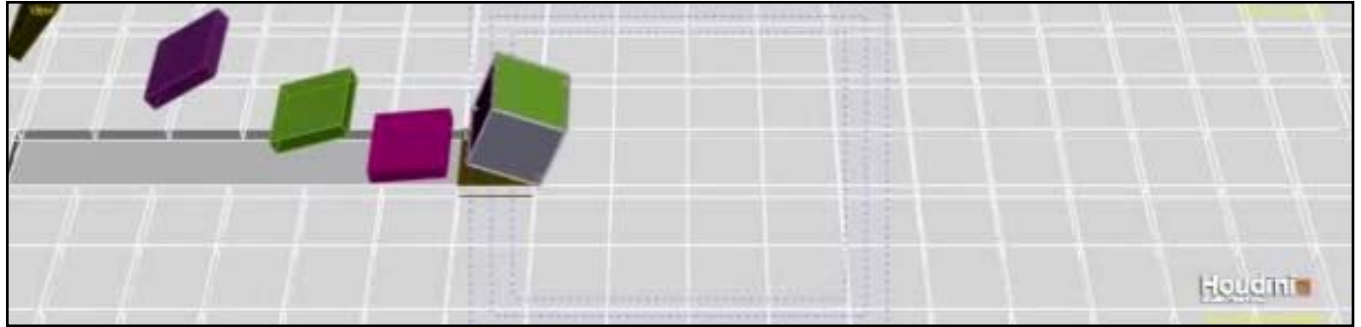
Double points are detected automatically and are skipped or optionally coloured red.

## 12: Foldable Display

Another shot from the series “growing stuff”.

A 0..1 slider controls the folding of the display independent from \$F.

## 13: Color Releasing Cube



An application for my rolling cube rig.

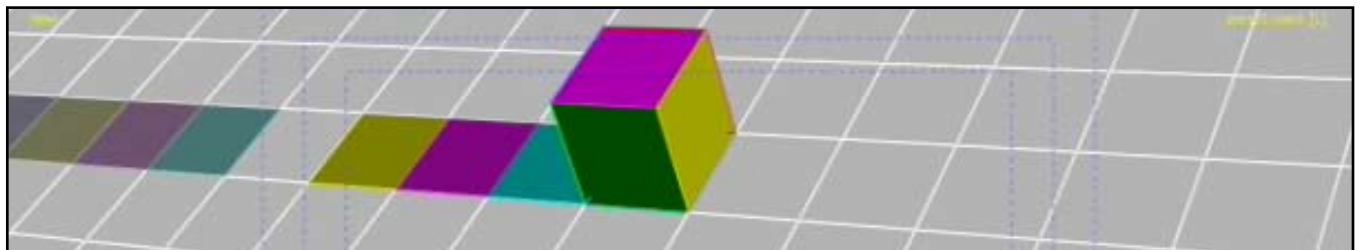
The cube is animated by controlling the position keys - the rotation is calculated on the fly.

In this shot the cube is also a collision object in a POPnetwork. On collision the particles inherit the color of the hitting face and start floating away.

Related:

<http://www.preset.de/2007/0525/rollingcube/>

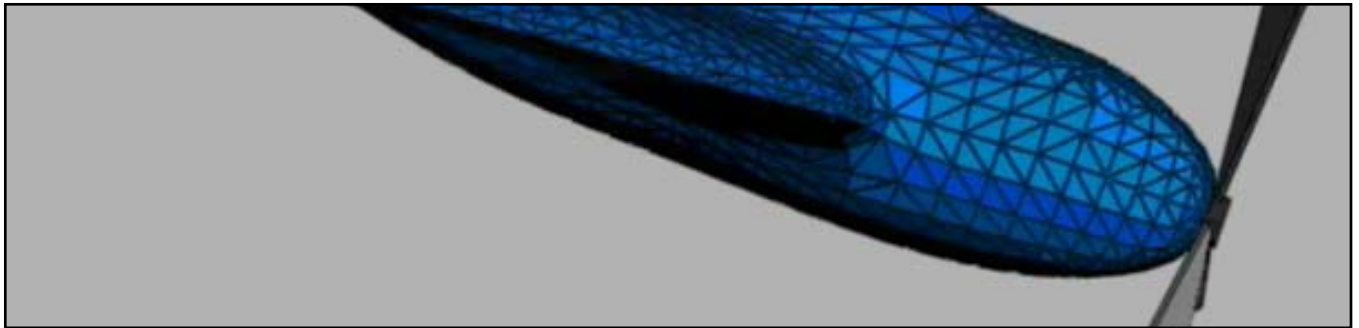
## 14: Color Stamping Cube



In this shot the cube stamps the colors to the floor

The saturation is controlled by the length of collision (WIP)

## 15: Small Plane HDA



I modelled the plane using the box modelling technique in houdini to give the RDG Rotor HDA an reason for being. The polyextrude and editSOPs values are controlled by the parameters of the interface.

The Rotor HDA rotates objects based on the value entered in the rotations per minute field (RPM). The interface provides buttons to animated the start and stop of the engine.

Related

<http://www.preset.de/2007/0601/smallfighter/>

## 16: VEX Mantra Shaders - Dots and Dashes

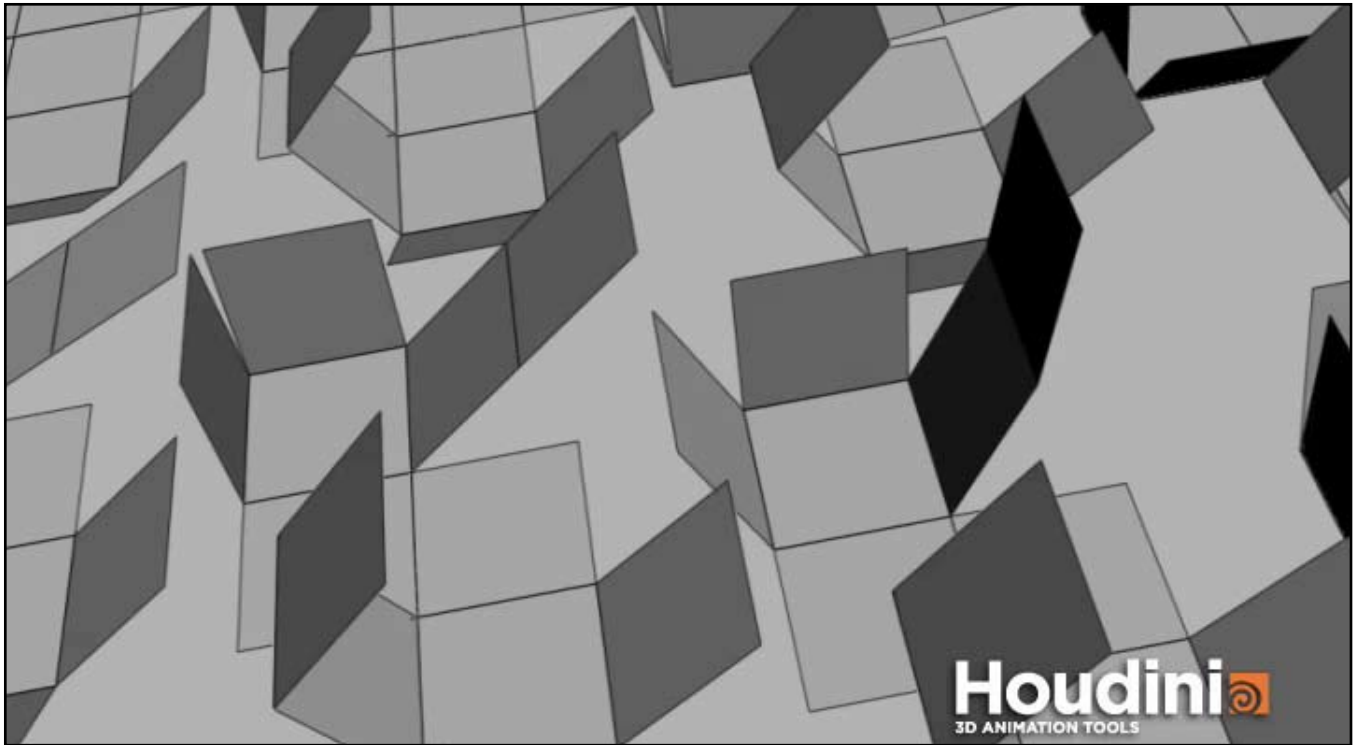


These Mantra shaders can be used to texture paper models.

The parameters provide access to the look and number of the dashes and dots.

They work best on cubes - who needs other objects anyway?

## 17: Array of folding Cubes



Folding Cube HDAs are copied to grids and animated with stamped random values.

## Contact

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