

Animated diagram

Hello! Salut! Here's a new free tutorial showing the way to build a "tentacular" diagram. Animated by a few keyframes and some easy expressions. It's usefull and with a cool effect to show composition of a group for exemple or whatever you want.

•01•

Create a new Comp (size 1050px on 576px, 8 seconds) and add a brown background. Call this Comp "**Final**".

Create a blue solid (2B9CB3) of **80px** by **80px**, call it "**base**", and add a **circular mask** (double-click on the ellipse mask tool).

Settle his position : **184** for x and **468** for y.

Insert a scale key of **0%** at **00:00**, **120%** at **00:10** and **100%** at **00:20**.

You may immediately finish this cercle's animation by adding a **scale key** of **100%** at **06:12**, **120%** at **06:17** in smoothed interpolation, and a last one of **0%** at **07:04**.

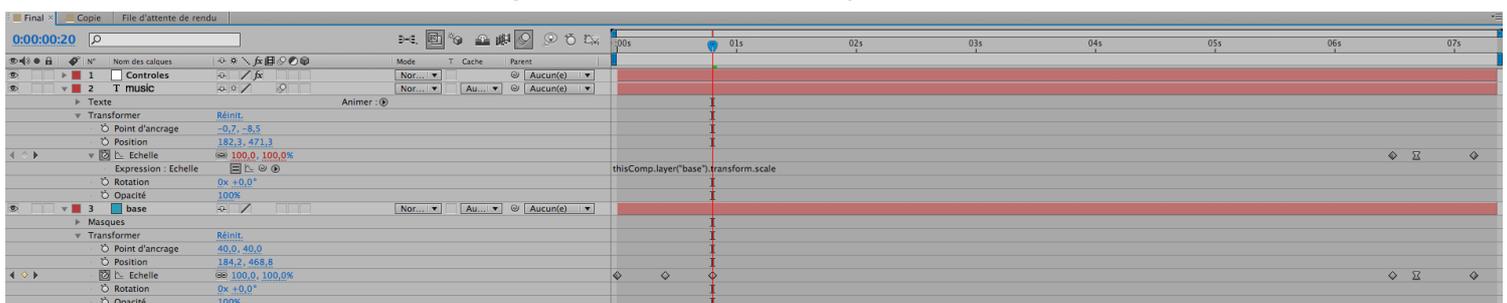
•02•

With the text tool, **create** a new text layer writing "**music**" and place it over the cercle "base", in the middle of him.

Alt+click on scale, and with the lasso, link it to the scale of the layer "**base**", wich gives us the following expression :

thisComp.layer("base").transform.scale

•We won't have nothing to do with these two layers from now.



•03•

Create a new solid of the same blue, **50px** by **50px**. His name is "**rond1**".

All the new layers an solids will now be placed **below** the "**base**".

The solid starts at **00:10** (**alt+ù**) and ends at **06:12** (**alt+\$**).

Create a **Null Object** and call it "**Controle**". Add him a "**slider**" (*Effects/Option for expressions/Slider*). Call it "**Echelle**" (that means "Scale" in french).

Add an **ease key** (F9) with a **0 value** at **00:20**, **bézier auto** of **80** at **01:05**, and **ease** of **60** at **01:15**.

You should now **copy** these 3 keys, **paste** them at **05:10** and while still selected, **inverse** them (right-click, inverse keyframes) up to end the animation of **rond1**.

•04•

Alt-Click on the scale parameter of "**rond1**", and use the lasso to **link** it to the Slider of the "Controle" layer you just made before.

Change the expression to get this :

```
temp = thisComp.layer("Controle").effect("Echelle")("Curseur");
[temp, temp]
```

The scale of **rond1** (and the next we'll do after) is now linked to the **Controle**.

•05•

Move rond1 to be hidden by "base". At the beginning of his layer (**00:10**), activate a position key. At **00:20**, move it to x=**286**, y=**294**. At **01:05**, move rond1 to **277**, **315**.

Copy those 3 keys, **paste** them at **05:00** and **inverse** them.

Add a little **wiggle** on position : **alt+clik** and **write** :

```
wiggle(.2,50)
```

•That means a very soft random move of 50 pixels max on a frequency of 0,2 per second, it's very soft and is exactly what we need.

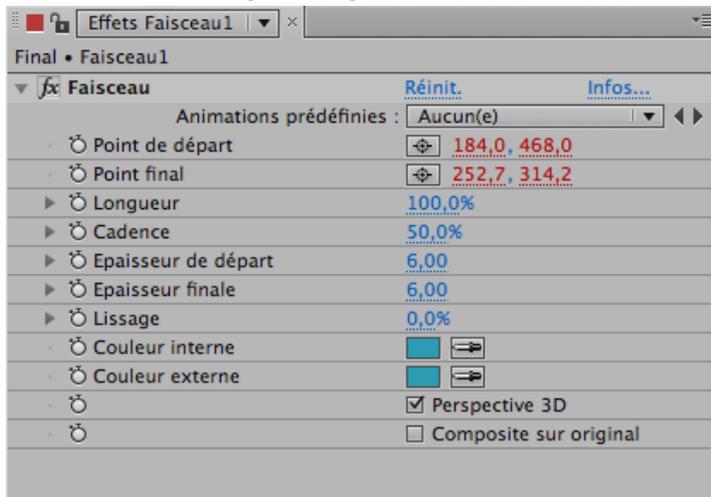


•06•

We are now going to create the fist beam between the base and the rond1.

Create a new solid called "**Faisceau1**" ("beam" in french) and add him the effect **Beam** (Effets/generation/Beam).

Enter the following settings :



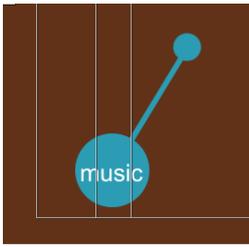
•The in an out color is the same than the layer and the base (2B9CB3).

Alt-Click on **Starting point** and with the lasso link it to the **position** of the "**base**".

Alt-Click on **Final point** and link it to the **position** of "**rond1**".



•This will be the general basis : The starting point of each beam will always be linked to the base, and his final point to his corresponding round.



The result is visible here.

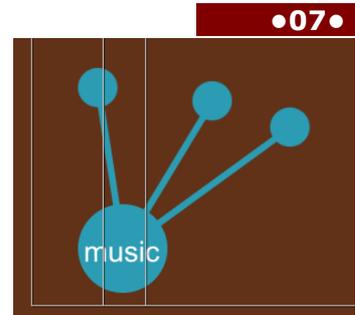
The beam follows the little "rond" and moves with him.

To create the two next beams, just **duplicate 2x** the **rond1** and the **Faisceaux1** (cmd+D or ctrl+D on PC).

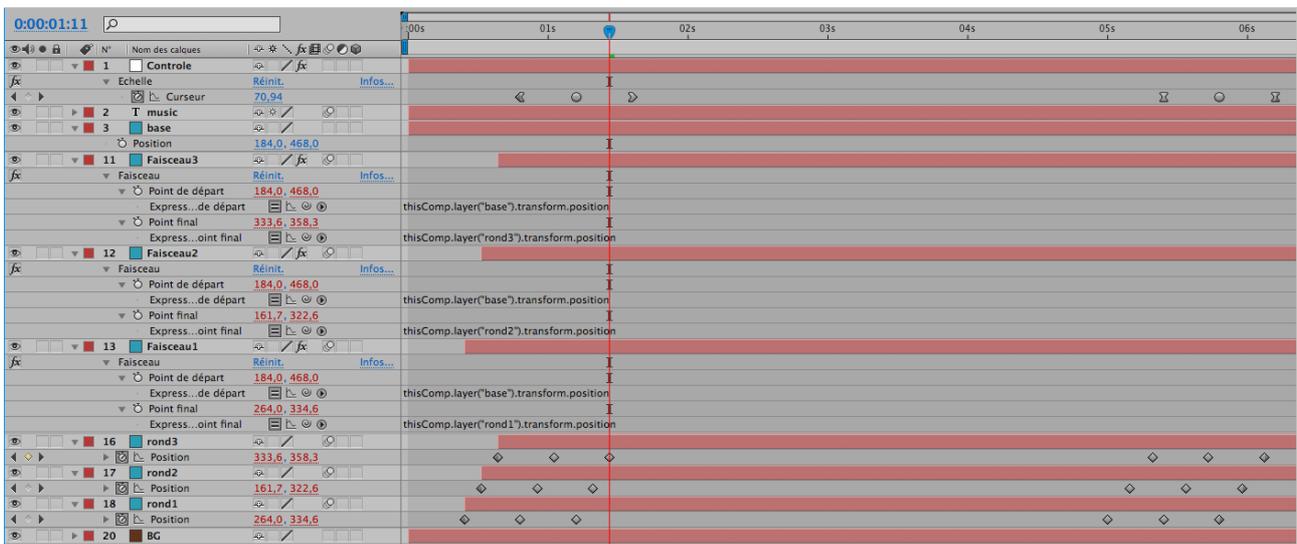
Change position of **rond2** and of **rond3** (like on picture on the side) on their **two last** keyframes. In the TimeLine, offset **each new layer +3 images**.

Open the expression of faisceaux2 and 3 and **change** their links. The **Faisceau2's Final Point** must be linked to **rond2**

and the one of **Faisceau3** linked to **rond3**.



The TimeLine should then look like this.

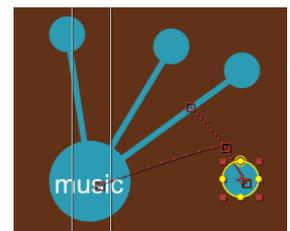


•08•

We are now going to make the 2 secondary beams, leaving from the middle of the others.

Duplicate the **rond3** and the **Faisceau3** and offset them **+3 images**.

Change position of the just created **rond4** on his second and third key and copy them inverted at the end of his layerto obtain something like this. →



•09•

Open the expressions of **Faisceau4** (cmd or ctrl+u).

You need to change the expression of **Final point**, so it will be linked to **rond4**.

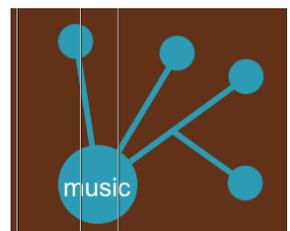
The **Starting point** will get the following expression :

```

x = thisComp.layer("Faisceau3").effect("Faisceau")("Starting point")[0];
y = thisComp.layer("Faisceau3").effect("Faisceau")("Starting point")[1];
P = [x,y];
a = thisComp.layer("rond3").transform.position[0];
b = thisComp.layer("rond3").transform.position[1];
M = [a,b];
distance=P+M;
distance/2

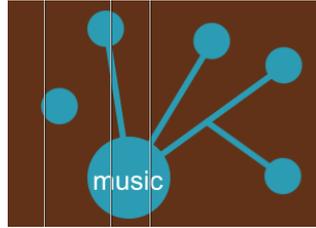
```

•To be clear, **x** and **y** are the coordinates of the precedent beam's starting point. **a** and **b** are the precedent rond's coordinates. Those two positions (**P+M**) form a ligne that we divide (**distance/2**) to get the middle of faisceau3. This middle become then the Starting point of Faisceau4.



•10•

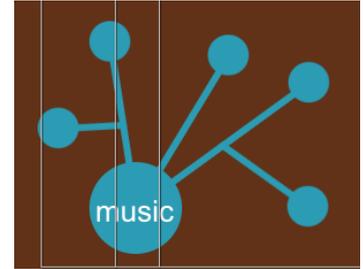
Duplicate the **rond4** and **Faisceau4**. Offset the layers **+3 images**. Move the **rond5** on his two last keys like this →



Change the expression of Final point to link it to **rond5**.

Change the expression of Starting point to link it to **faisceau2** :

```
x = thisComp.layer("Faisceau2").effect("Faisceau")("Starting point")[0];
y = thisComp.layer("Faisceau2").effect("Faisceau")("Starting point")[1];
P = [x,y];
a = thisComp.layer("rond2").transform.position[0];
b = thisComp.layer("rond2").transform.position[1]
M = [a,b];
distance=P+M;
distance/2
```



•11•

You can add, if you need, some text or number or logo on every "rond".

For **rond1** for exemple, go to the beginning of this layer, and with the text tool write (**1-Opera** for exemple) in left flag (left aligned).

Move this text up to get his **Anchor point** right in the middle of rond1.

Open his scale option and **add** the following expression, this will link the changes to the rond :

```
thisComp.layer("rond1").transform.scale*3
```

Open his position option and **add** the following expression, wich will link it to the rond :

```
thisComp.layer("rond1").transform.position
```

•12•

Repete number **•11•** for each word or number you want to add, being carefull to **change** the **reference** ("rond1") in expression, according to the "rond" you are working on.

Here is for this tutorial. Do a Ram preview to check the result. Don't forget to save regularly. Don't hesitate to modify, to add, to remove, to change, "bref", to try. Possibilities are numerous... the pleasure comes from the discover.

*Don't hesitate to use this tuto **but please** not to sell it, it belongs to me.*

Don't hesitate to tell me what you think of the result or to show me how you used it, by letting me a word on <http://4after.wordpress.com>.

Hoping it was usefull for you in anyway .

Good after'

Sandeman

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