

GDC⁰⁹ Europe

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Game Developers Conference® Europe
Cologne Congress Center East
Cologne, Germany

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Design, Constraints and Integrity

Dino Dini

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What is design?

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What is design?

CONCLUSION:

Design is the management
of constraints.

Definitions ought to be useful.

I use this definition all the time...

It allows to be describe
what I do as a designer.

It allows me to teach
the principles of design.

It allows me to explain the
process to a customer.

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The logo for GDC Europe 09, featuring the text "GDC" in a large, bold, white font with "09" in a smaller font inside the "O", and "Europe" in a large, bold, white font below it. The background is a dark blue and purple gradient with abstract, glowing green and blue circular patterns.

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But even if you do not agree...
yet...

*Please humour me for the time
being <3*

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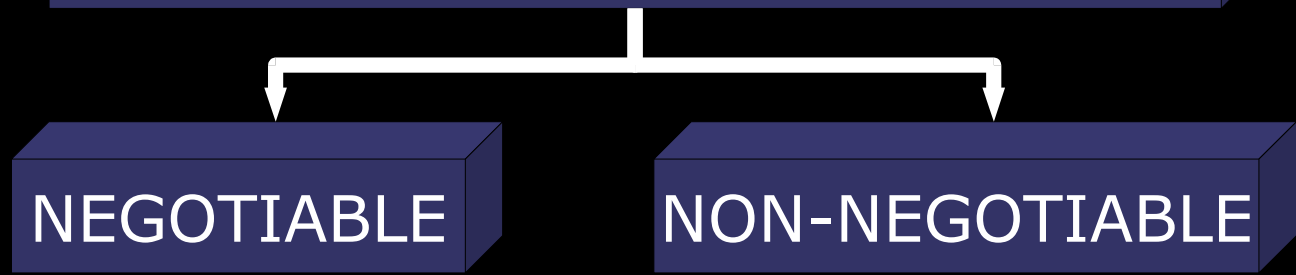


If the process of design is simply the management of constraints, what is a constraint exactly, and what kinds of constraint are there?

- *A suggested definition will come later, but first... let's look at the types.*

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TYPES OF DESIGN CONSTRAINT



What is the difference between negotiable and non-negotiable constraints?

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In the beginning....

IT'S ALL NEGOTIABLE!

But this means that you have ***infinite possibilities***, but ***zero identity***.

This is typically the case before a project starts

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The logo for THINK SERVICES, featuring the word "THINK" in a bold, white font above the word "SERVICES" in a smaller, white font. Below "SERVICES" is a small, white, stylized graphic of a person's head and shoulders.

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IT'S ALL NEGOTIABLE!

So first of all... the designer must start identifying and selecting non-negotiable constraints...

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The logo for MADE (my Academy for Digital Entertainment), featuring the word "MADE" in a large, bold, white font, followed by three colored squares (red, green, blue). Below the word "MADE" is the text "my Academy for Digital Entertainment" in a smaller, white font.

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NEGOTIABLE!

TIME

BUDGET

SPECIFICATION

NON-NEGOTIABLE!

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NEGOTIABLE!

SPECIFICATION

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NON-NEGOTIABLE!

SPECIFICATION

BUDGET

TIME

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NEGOTIABLE!

SPECIFICATION

We start to reduce
possibilities and
increase identity

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NON-NEGOTIABLE!

SPECIFICATION

BUDGET

TIME



Now, a long time ago I made a football game for the ATARI ST.

It was a big success, and I wondered what I had done to cause that success.

I shall use this as a little test case.... if you don't mind going back in time.

These principles are universal.

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NEGOTIABLE
SPECIFICATION

EVERYTHING ELSE

At this point, the
designer (me)
had identified the
key requirements
(constraints) as
specified by the
customer

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NON-NEGOTIABLE
SPECIFICATION

FOOTBALL GAME

ATARI ST

NEGOTIABLE
SPECIFICATION

EVERYTHING ELSE

But clearly this is
not enough.

Next I must
choose my own
non-negotiable
constraints...

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NON-NEGOTIABLE
SPECIFICATION

FOOTBALL GAME

ATARI ST

NEGOTIABLE
SPECIFICATION

EVERYTHING ELSE

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NON-NEGOTIABLE
SPECIFICATION

FOOTBALL GAME

ATARI ST

... increasing the
identity of the design
while reducing the
possibilities

KEY NON-NEGOTIABLE CONSTRAINTS FOR *KICKOFF* CHOSEN BY THE DESIGNER

50 FPS

Air Friction

Correct scale
football pitch

No "glue foot"

Sprites not too
small

No cheating
the shots

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It is the constraints that give form
to a design.

This is universally true

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The quality of a design thus
depends on how well chosen
the constraints are

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How do we know when something
is good?

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"You know a good design
when you want to lick it"
- *Steve Jobs*

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"You know a good person when you
want to like them"
- *Dino Dini*

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Human beings are very good
at detecting whether something
has integrity

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Because we like things that have a strong identity and that requires a strong integrity.

Without integrity, things lose their identity and become less desirable

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All successful designs
demonstrate a strong identity.

Integrity does not guarantee
success, but lack of it ensures
failure.

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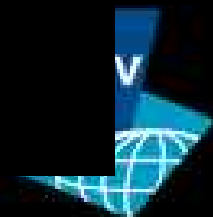
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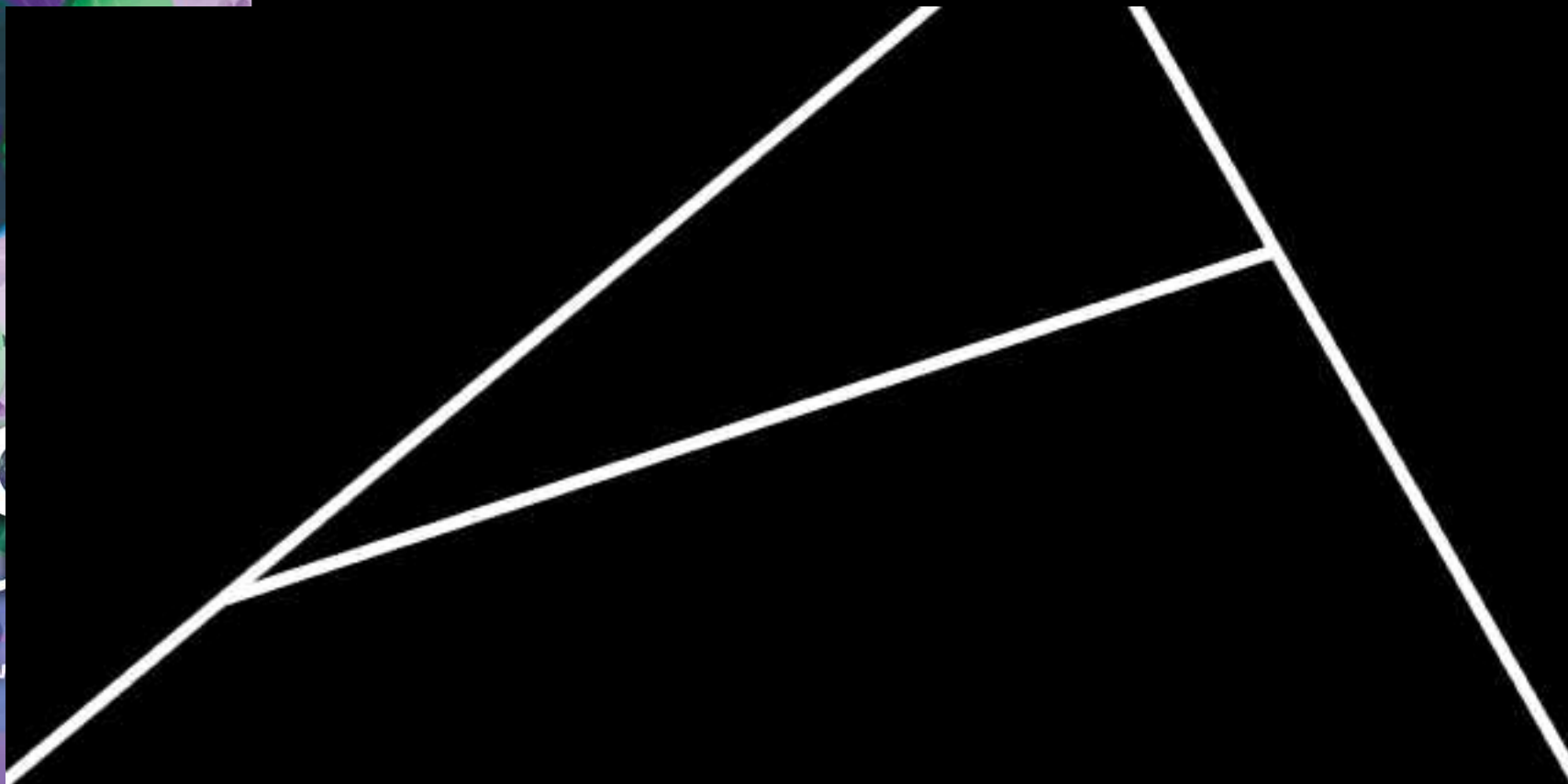
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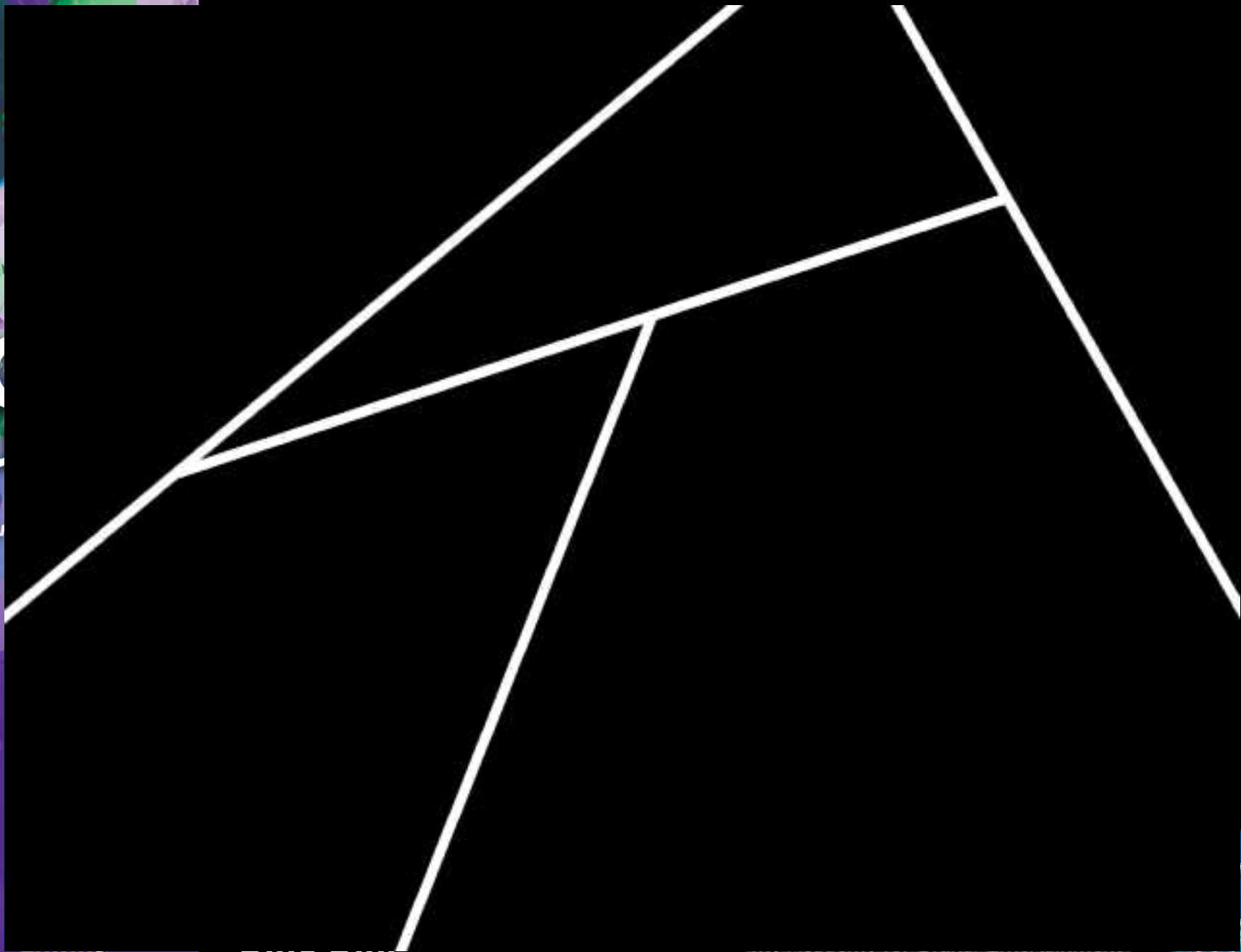
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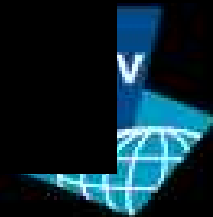
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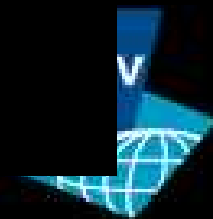
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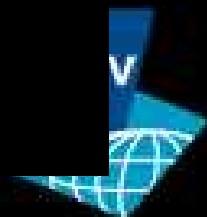
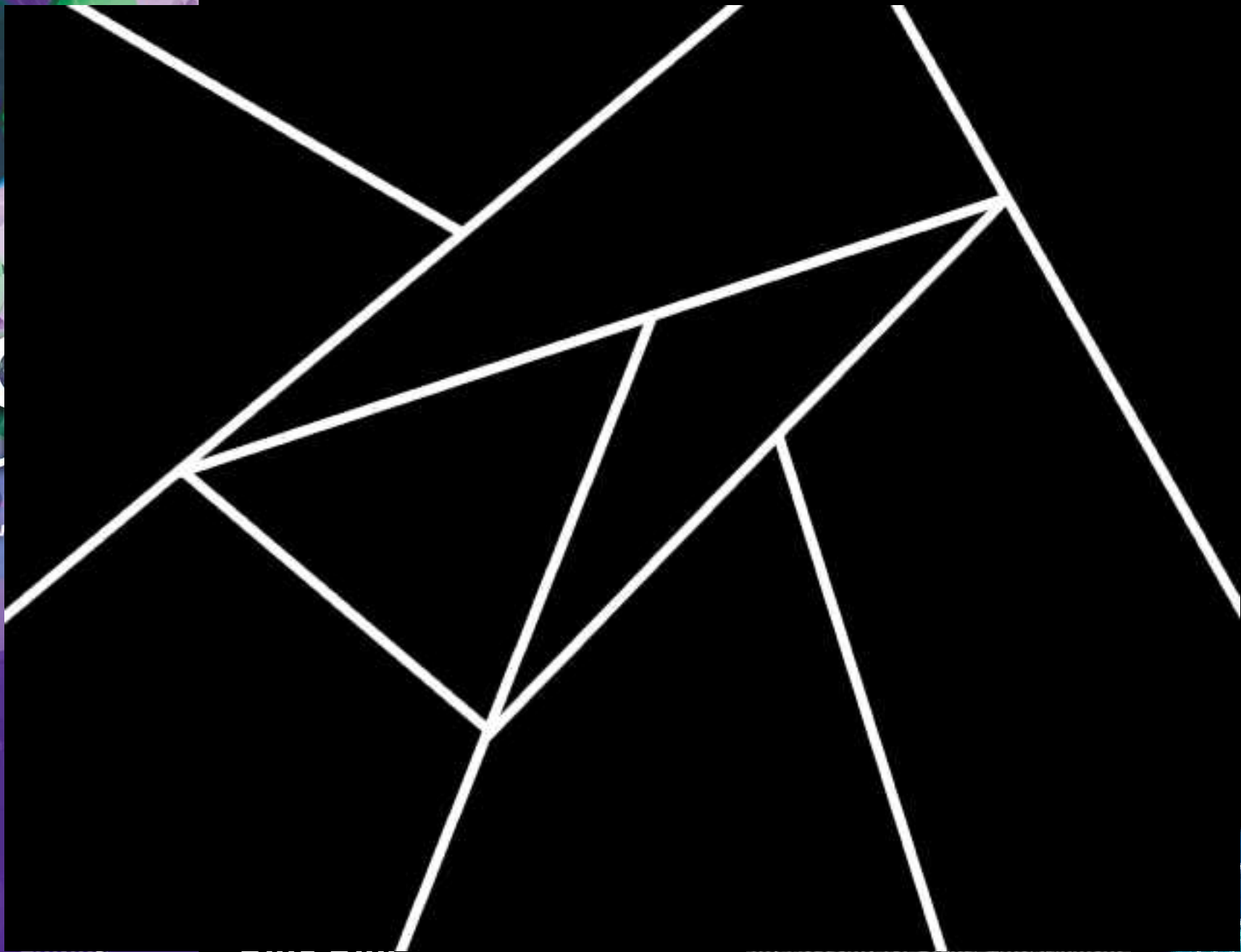
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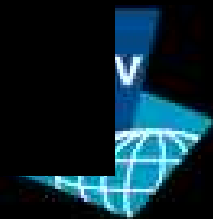
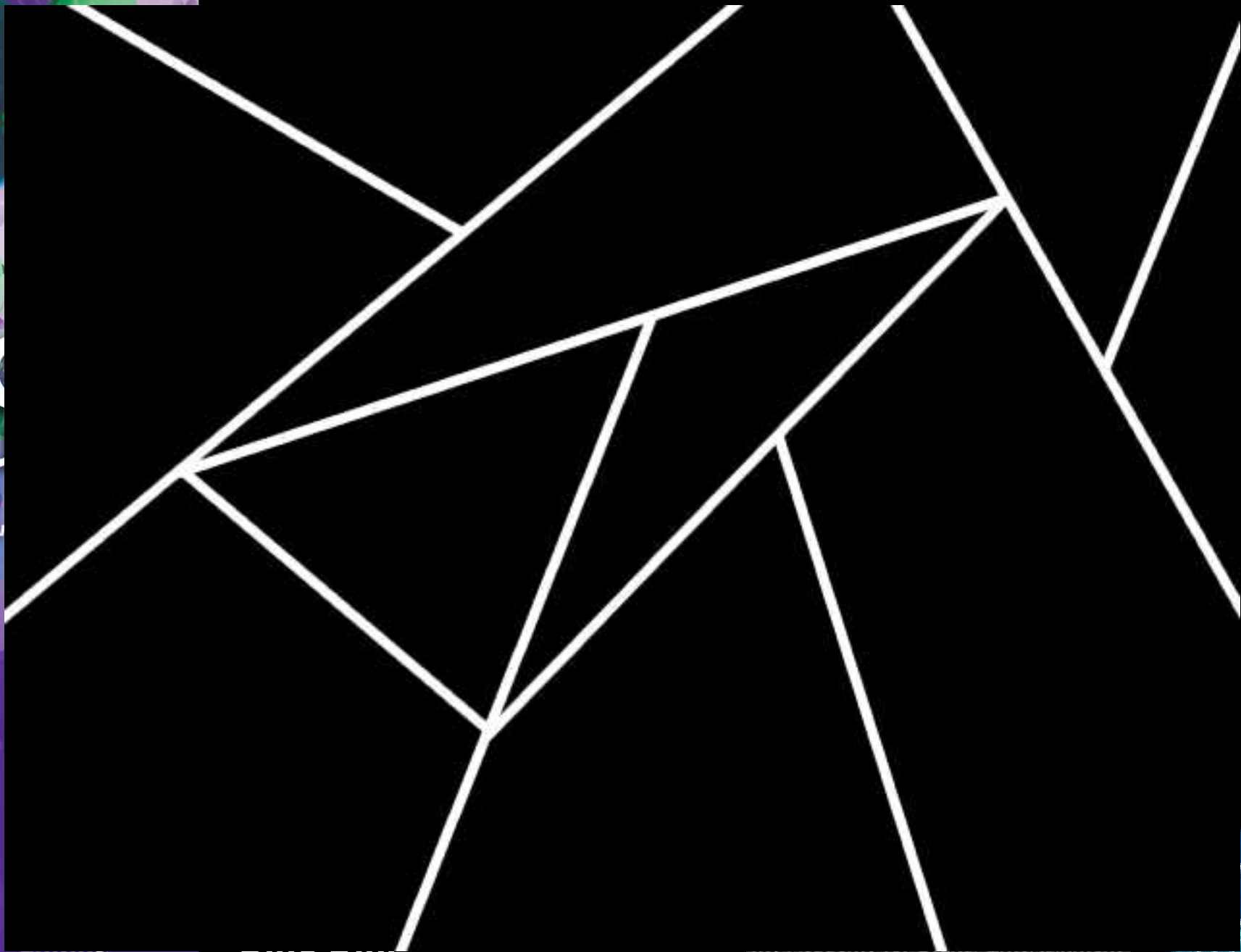
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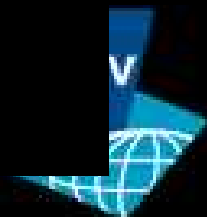
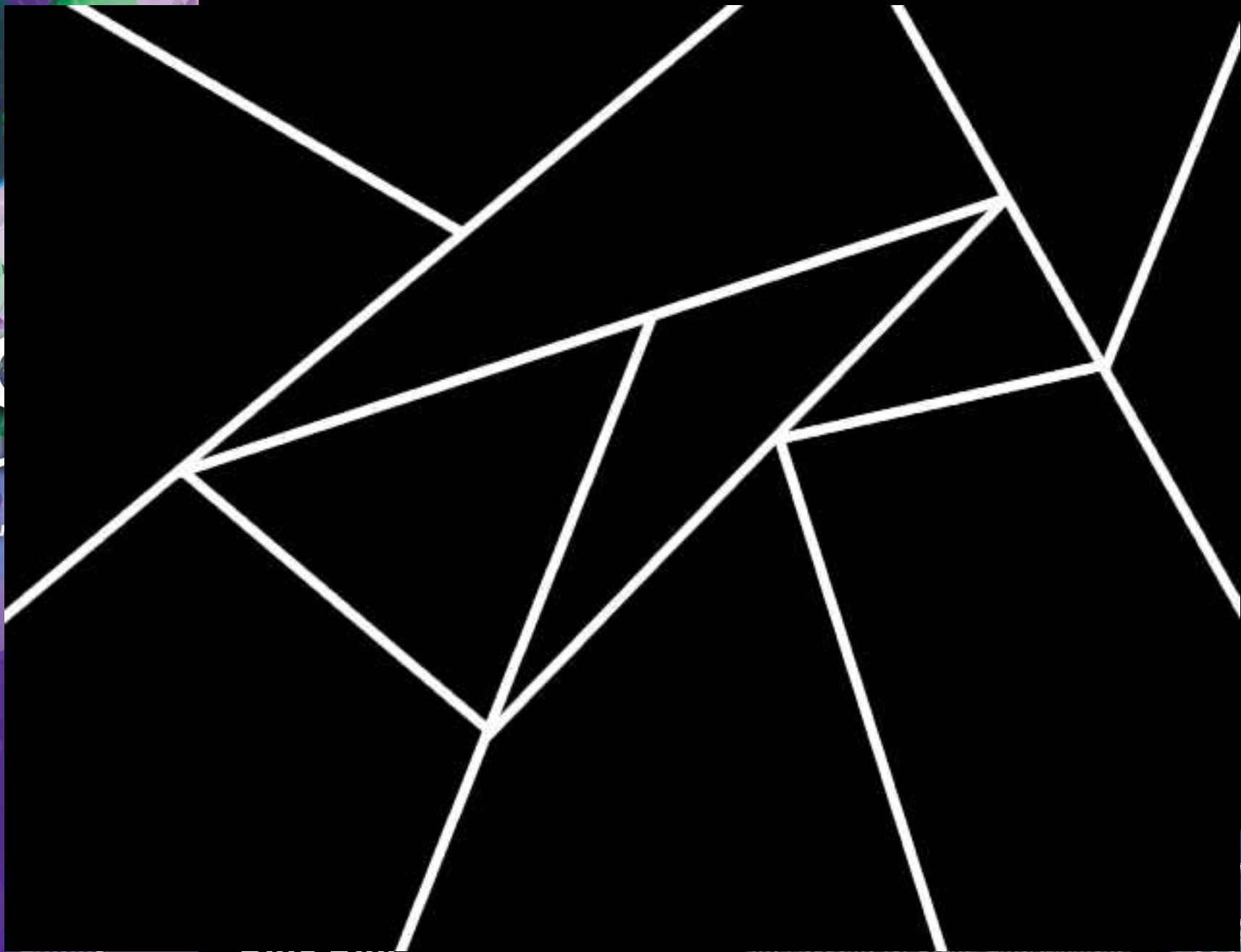
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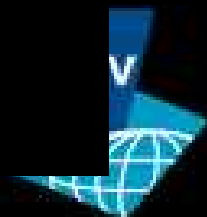
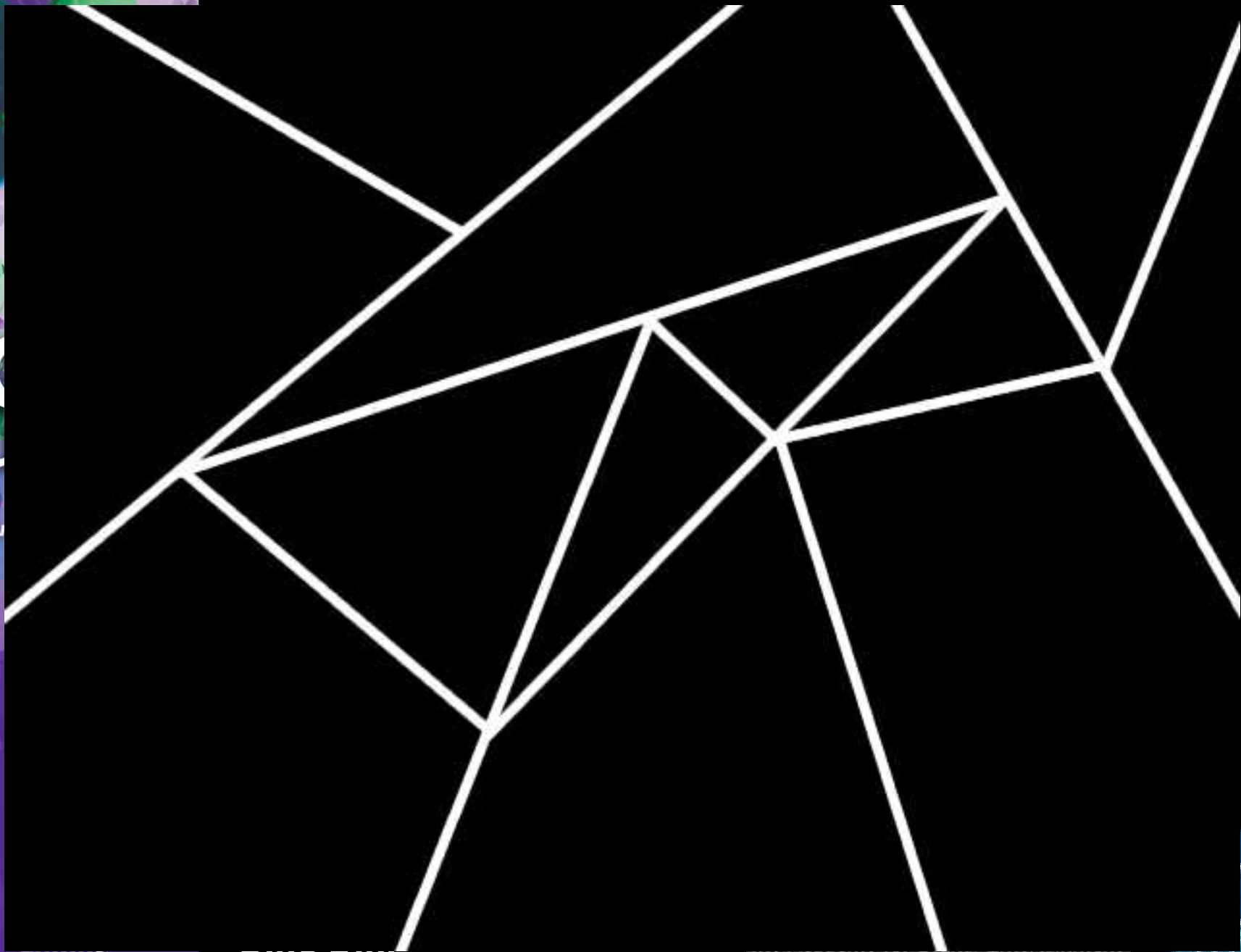
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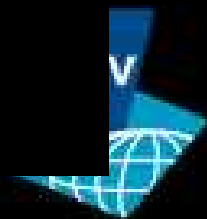
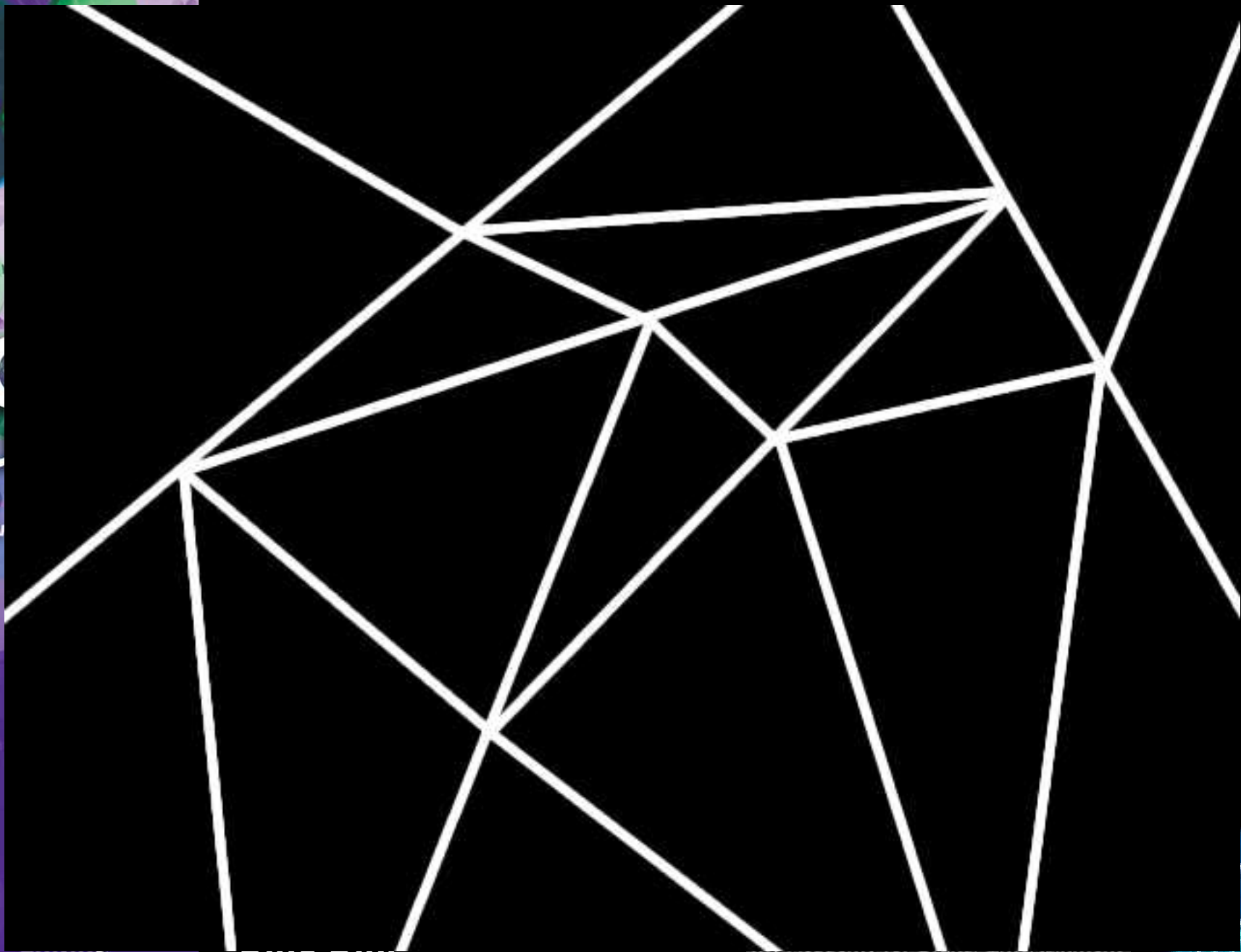
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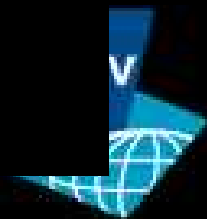
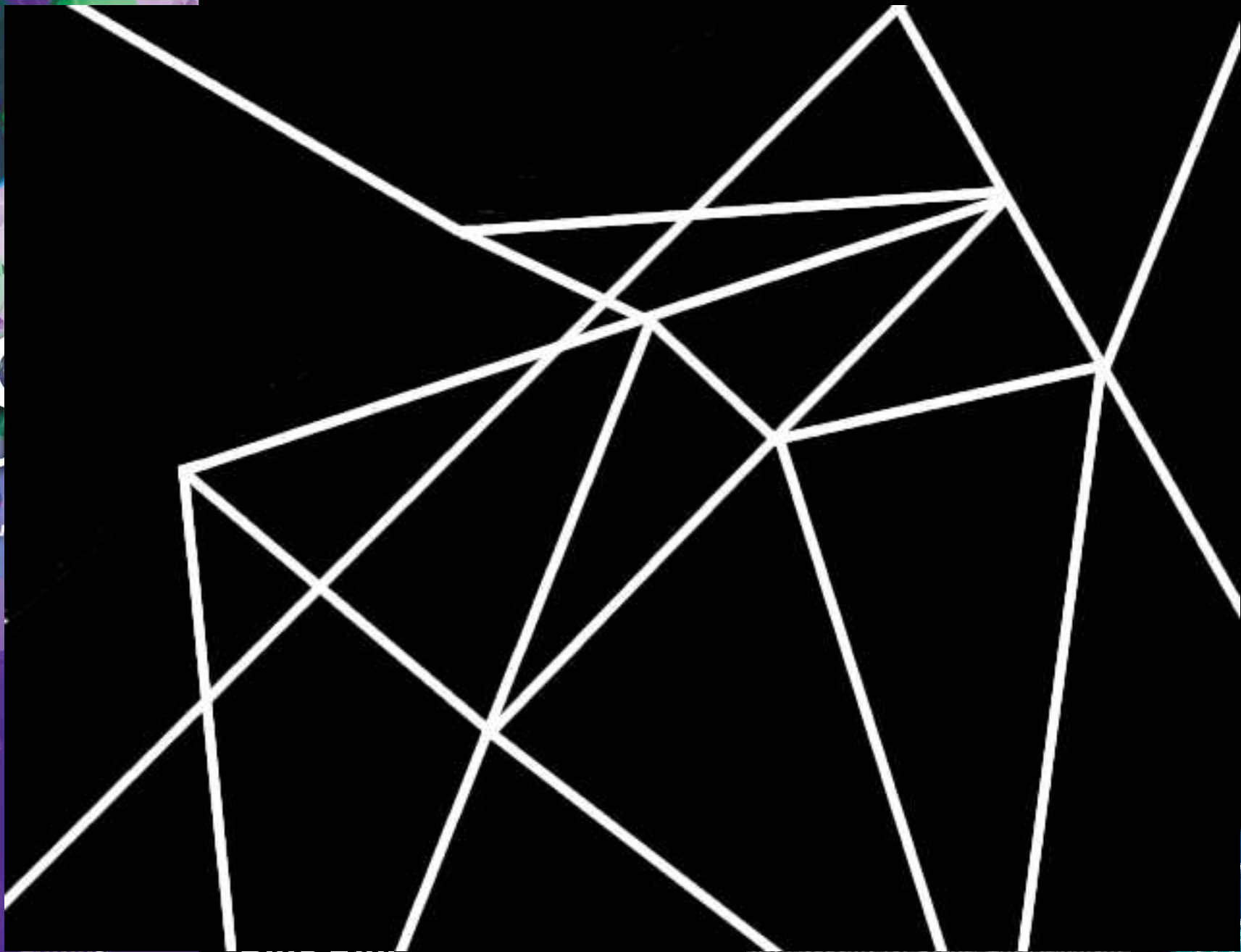
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Definitions: Work in progress

Concept:

Something which is to be made or achieved

Design:

A collection of decisions that create a set of constraints which give a concept its identity.

Concept Identity:

The true nature of a concept which may or may not match the intentions of its designer

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Definitions: Work in progress

Constraint:

A rule that reduces the possible outcomes of the concept and contributes to its identity

Non-negotiable constraint:

A constraint which, if broken, would cause a significant change to the identity of the design.

Negotiable constraint:

A constraint which maybe applied or not depending on circumstances, but which is not crucial to the identity of the concept.

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Definitions: Work in progress

Integrity:

How well something maintains its identity
(maintains its form)

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Definitions: Work in progress

Integrity:

How well something maintains its identity
(maintains its form)

... and we have seen how successful
designs always have integrity ...

... because lack of integrity results in loss
of identity. And a strong identity is
essential...

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A recipe for not guaranteeing failure

- 1) Choose your non negotiable constraints well
- 2) Stick to them
- 3) If you find you need to change non negotiable constraints, do so with full consideration of how that will effect the identity of your design.

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A recipe for not guaranteeing failure

Constraints are your ally.

They give form to what you do.

Choose them wisely, and stick to them.

This applies as much to your own life
as it does to video games.

What defines who you are?

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What defines who you are as person are
the constraints you live by...

which is why integrity is so important
because without it...
...you are nothing

And without integrity your
game design will be nothing
too....

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**“The only thing an anarchist can be
is an anarchist”**

**Choose the constraints you design by
wisely**

**Stick to these constraints and change
them not for the sake of convenience but
with careful thought as to how it will
effect the identity of the thing you are
trying to make...**

**Whether that is a video game, a
company, a code base, a chair, or your
life.**

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Thank you.

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