

Fonts for video games!

(overlooked and
underserved)

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- 01** Font support in game engines
- 02** Opportunities for
type designers & foundries
- 03** Better typography in
game development

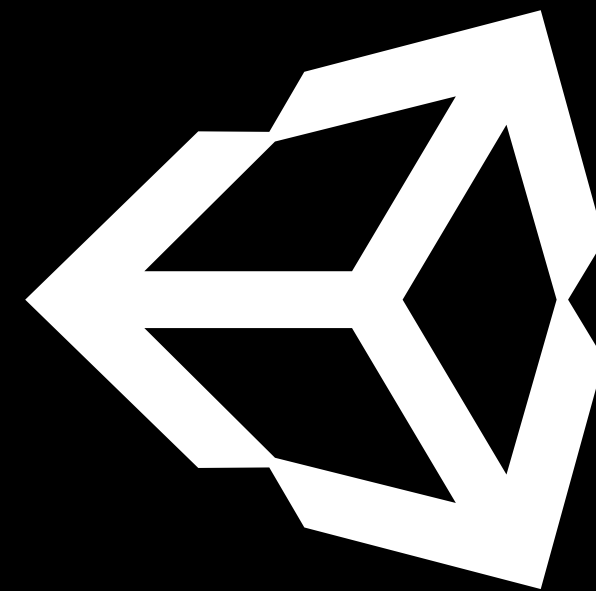
Section 01

Font support in game engines

Top game engines

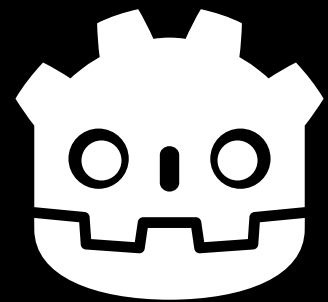


UNREAL
ENGINE



unity

Indie game engines

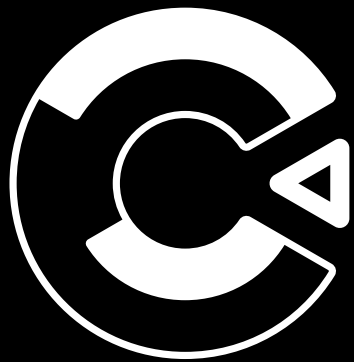


GODOT
Game engine

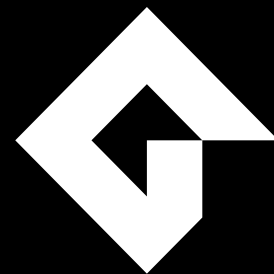
RPG MAKER[®]



CRYENGINE[®]



CONSTRUCT

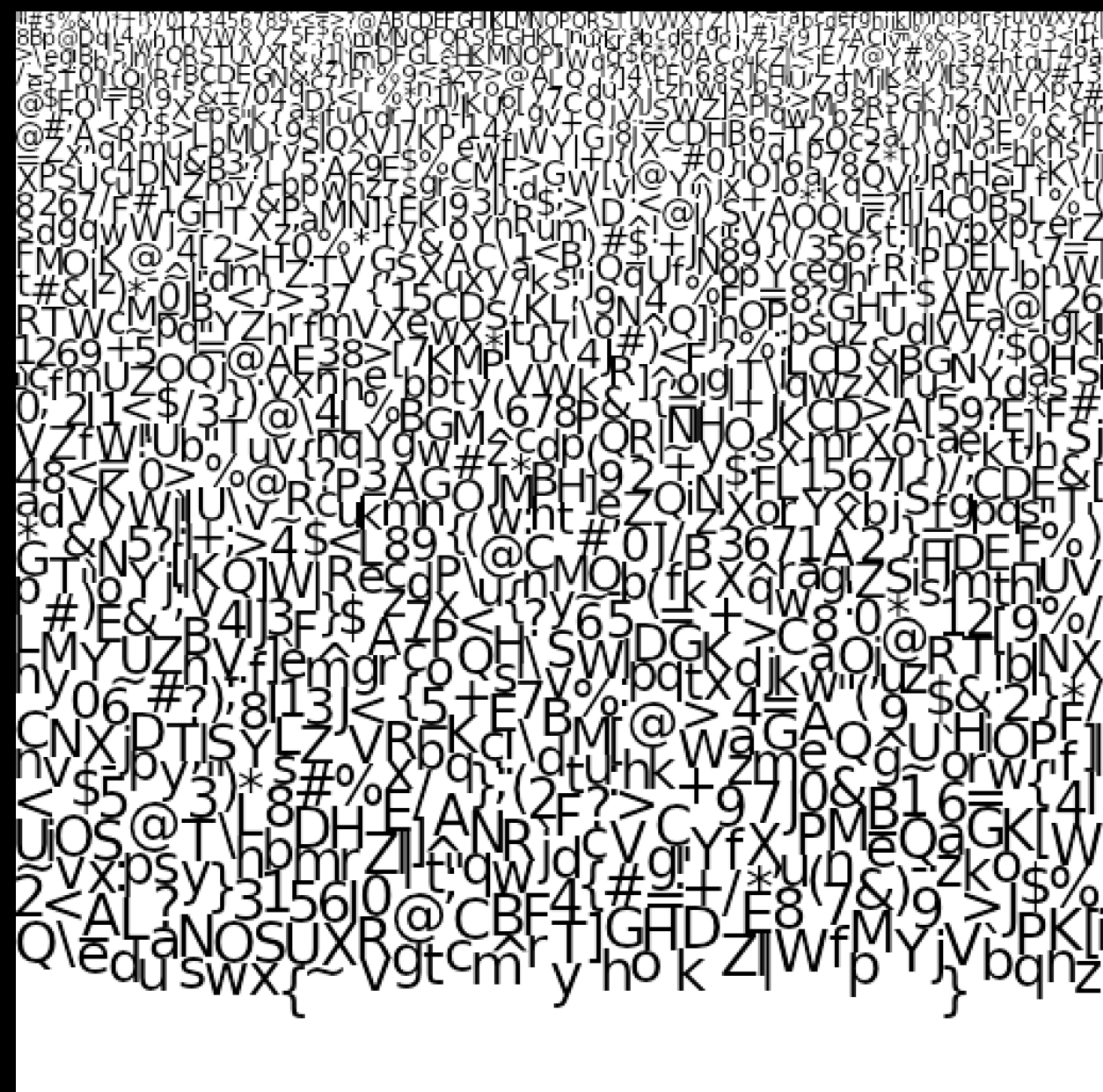


GameMaker
Studio 2[™]

PICO-8⁺



Importing fonts into a game engine



"A texture atlas of glyphs" by Nicolas P. Rousier
Licensed under CC BY-SA 4.0

TTF/OTF file

↓↓↓

Sprite map (BMFont = PNG + TXT/XML/JSON/BIN)

↓↓↓

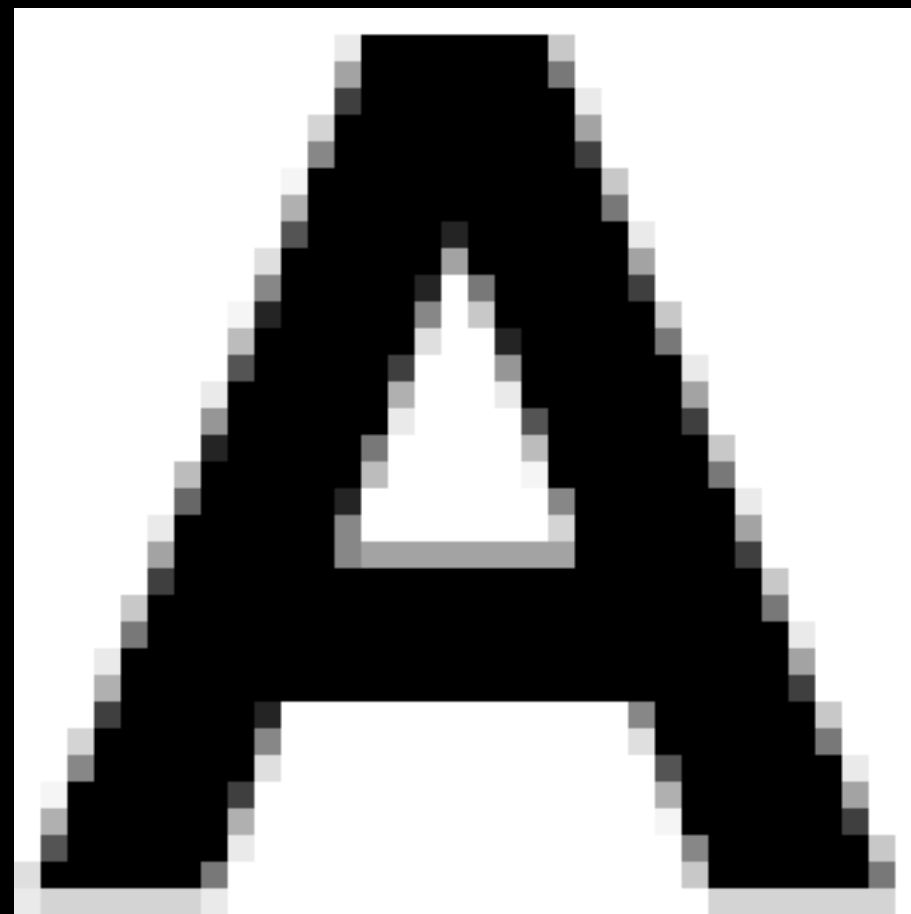
Import to engine

↓↓↓

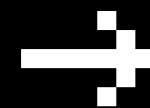
Use text in game

```
info face="BitPotionExt" size=-16 bold=0 italic=0 charset="" unicode=1 stretchH=100 smooth=0 aa=1 padd
common lineHeight=14 base=11 scaleW=256 scaleH=256 pages=1 packed=0 alphaChnl=0 redChnl=4 greenChnl=4
page id=0 file="BitPotionExt_0.png"
chars count=319
char id=32 x=38 y=54 width=1 height=1 xoffset=0 yoffset=0 xadvance=5 page=
char id=33 x=10 y=48 width=1 height=7 xoffset=0 yoffset=4 xadvance=2 page=
char id=34 x=0 y=57 width=3 height=2 xoffset=0 yoffset=4 xadvance=4 page=
char id=35 x=12 y=48 width=7 height=6 xoffset=0 yoffset=5 xadvance=8 page=
char id=36 x=195 y=38 width=4 height=7 xoffset=0 yoffset=4 xadvance=5 page=
char id=37 x=45 y=47 width=4 height=6 xoffset=0 yoffset=5 xadvance=5 page=
char id=38 x=34 y=31 width=6 height=7 xoffset=0 yoffset=4 xadvance=7 page=
```

Font rendering in 3D



32px text sprite

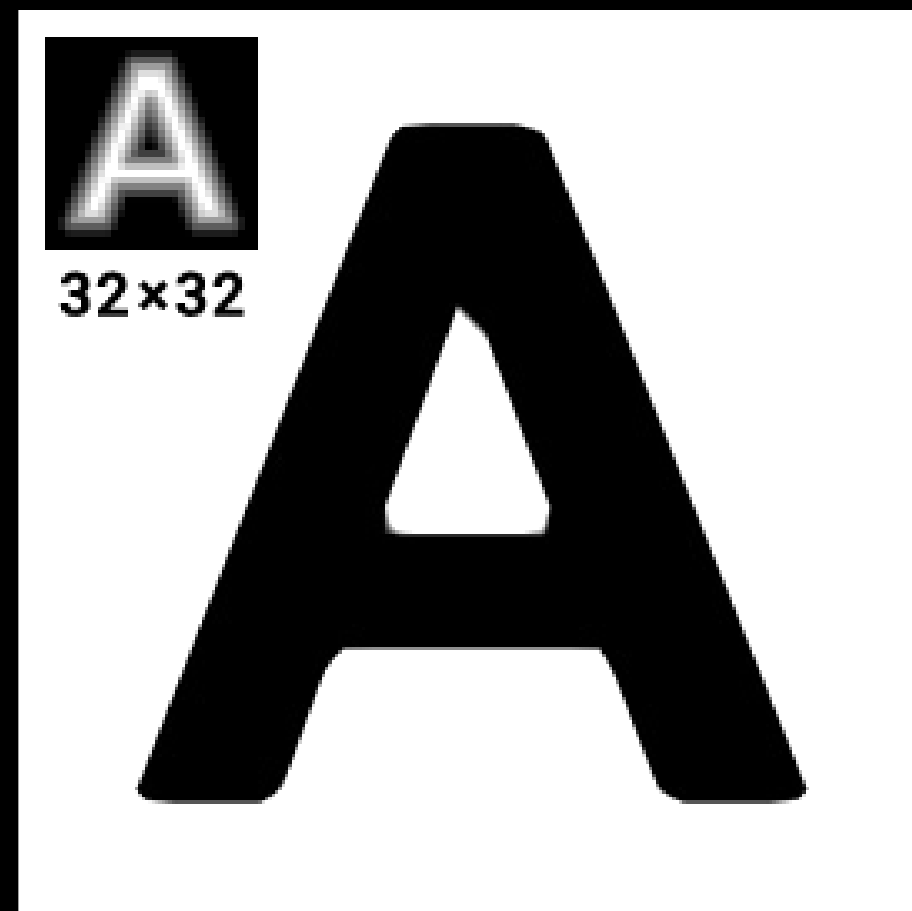


3D text render

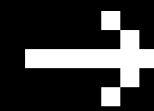


3D text render
with smoothing

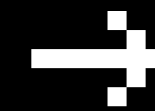
Font rendering in 3D with signed distance fields



Rendering (above) of
a 32px SDF sprite
(inset)



Rendering (above) of
a 16px MSDF sprite
(inset)



3D text render
from 16px MSDF

Images 1 & 2 by Viktor Chlumský

See also:

<https://github.com/Chlumsky/msdfgen>

"Improved Alpha-Tested Magnification for Vector Textures and Special Effects" by Chris Green (Valve Corporation)

Section 02

Opportunities for
type designers & foundries

Selling via game developer marketplaces

ARTSTATION MARKETPLACE

▸ artstation.com/marketplace

ITCH

▸ itch.io

UNITY ASSET STORE

▸ assetstore.unity.com

UNREAL ENGINE MARKETPLACE

▸ unrealengine.com/marketplace

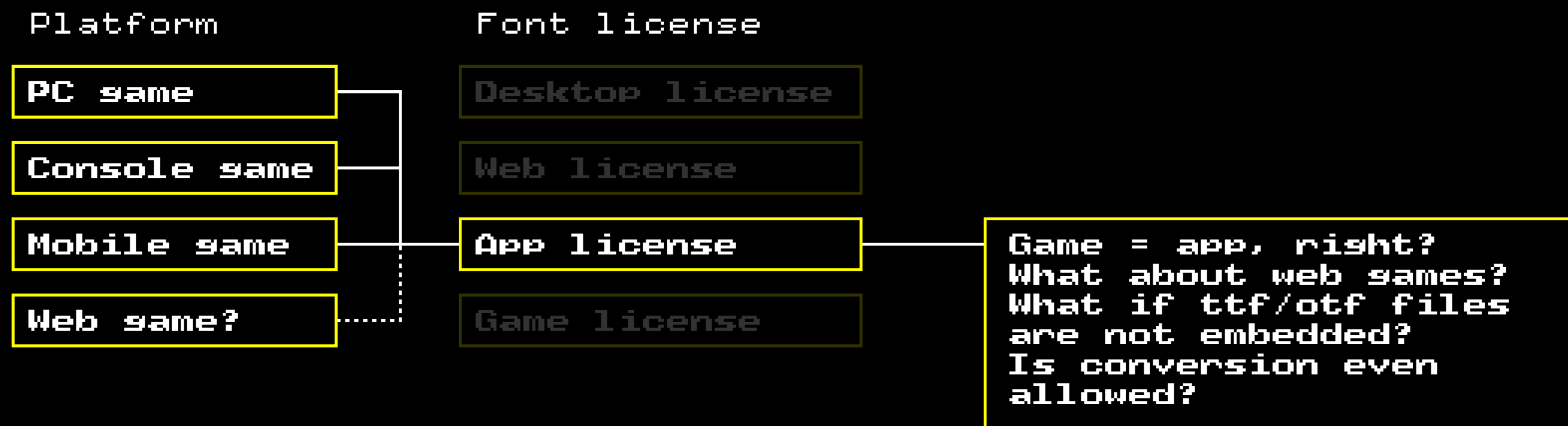
Making licenses workable for game development



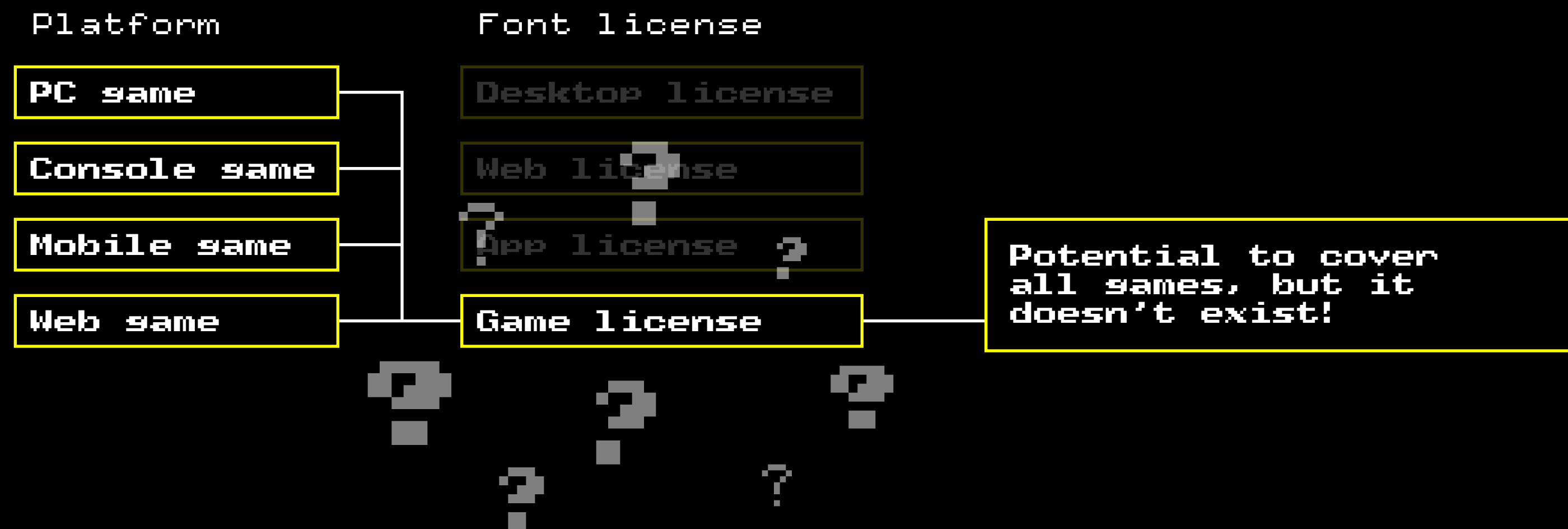
Making licenses workable for game development



Making licenses workable for game development



Making licenses workable for game development



More pixel fonts!

Fun!

Fast!

Design a font
in 1 hour!

NOT ENOUGH PIXEL
FONTS WITH:

- Extended character sets
- Creative display styles
- Clear and usable
license terms

Section 03

Better typography in games

Improve font licensing

Too many problems...

UNWORKABLE LICENSE TERMS FOR GAME DEVELOPMENT

- “No alphabet products”
- “No modifications”
- “No conversions”
- “No subsetting”
- Conventional wisdom that the license restrictions no longer apply once the text has been rasterized

...do we need a Game License?

Design fonts for game engines

- ▶ Pixel fonts (text & display)
- ▶ No kerning
- ▶ No ligatures
- ▶ No alternates
- ▶ No OpenType features
- ▶ Legibility

Tool development

- Shapins and language support
- Better rasterizing tools
- Plugins to export bitmap fonts
- Converting between vector and bitmap font formats

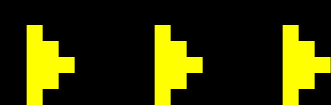
**Video game biz \$180 billion
worldwide in 2020**

(more than movie and music
industries combined)

Player Sans Mono
Player Sans Mono
Player Sans Mono
Player Sans Mono

An open-source 8x8 pixel font
family for game devs, with
an 8x13 Latin Extended set.

FREE



in the TypeWknd Goodies Bas
or [sithub.com/justinpenner/player-sans-mono](https://github.com/justinpenner/player-sans-mono)

**Thanks for
watching!**

SLIDE DECK, TRANSCRIPT & LINKS:

‣ sithub.com/justinpenner/fonts-for-games