



SHAPELESS VIDEO

Summary

Fifth Wall Point Video (.5wpv) — a shapeless video encoder and player. Frames are lists of colored points, not rectangles of pixels.

Best use now: transparent TVs and glass displays. Where there is no point, there is no pixel. The glass stays glass.

Product paper · 4 September 2026

The problem in one sentence

Every normal video file is a filled rectangle. On a see-through panel that rectangle is the bug: unused pixels light up as black (or milky) glass and hide whatever is behind the screen.

What shapeless encoding does

1. Start from ordinary raster (MP4, stills, generative I2V) plus a silhouette mask.
2. Keep only the samples that are actually lit.
3. Store them as timed {x, y, color} points in a .5wpv ZIP.
4. Play them so absence is transparency, not a black fill.

A doughnut clip has a real hole. A floating logo does not drag a black card with it. A product callout on a glass TV sits on the product, not on a 16:9 slab.

Why transparent / glass TVs first

Conventional MP4	Shapeless .5wpv
Always W×H, including empty field	Only lit samples
“Off” is still a pixel (often opaque black)	No sample → no light → see-through
Silhouette is a picture of a shape on a rectangle	The asset is the shape
Bandwidth pays for the unused box	File size tracks the silhouette

Transparent OLED, glass MICRO LED, storefront LED mesh, and museum vitrines all share the same contract: the unused field should disappear. Shapeless video is that contract in a file format.

Near-term playback on today's HDMI glass TVs is still a rectangle at the cable. The encoder still wins: author once as a silhouette, then key black-as-clear on the panel, or drive a native point player when the sink can take it. The Windows reference player already proves the idea — organic window regions punch real holes through the HWND.

What exists today

- Format v1, encode (MP4 + mask or luma gate), inspect, rasterize
- Windows pygame player with organic shaped windows (true holes, soft rim)
- Standalone package `fifth_wall_pointvideo` — not yet wired into Gallery / Live Take

What this is not

Not a replacement for social MP4. Not a finished LED-processor SDK. Not a claim that every glass TV already ingests point lists over HDMI.

How to try it

```
cd fifth_wall_pointvideo
pip install -r requirements.txt
python examples/make_demo.py demo.5wpv
python -m fw_pointvideo play demo.5wpv

python -m fw_pointvideo encode clip.mp4 out.5wpv --mask silhouette.png
```

Companion white paper: [Shapeless-Video-White-Paper.pdf](#)