

Caricatron

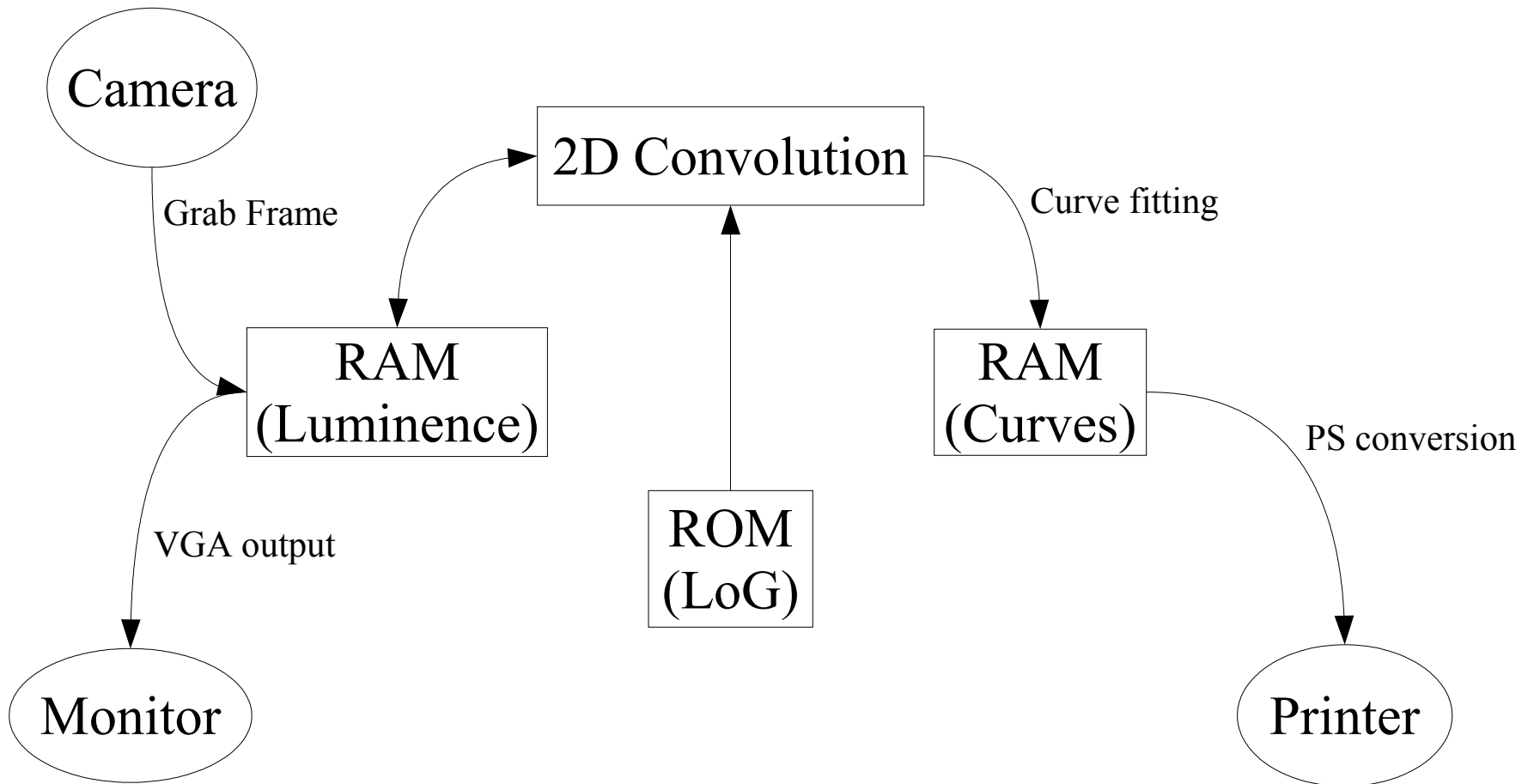
A system to starve the starving artists

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Objective

- Grab video frame from NTSC camera
- Detect edge pixels
- Convert to vector format
- *Caricaturize!* Exaggerate curves
- Output to PostScript printer

System



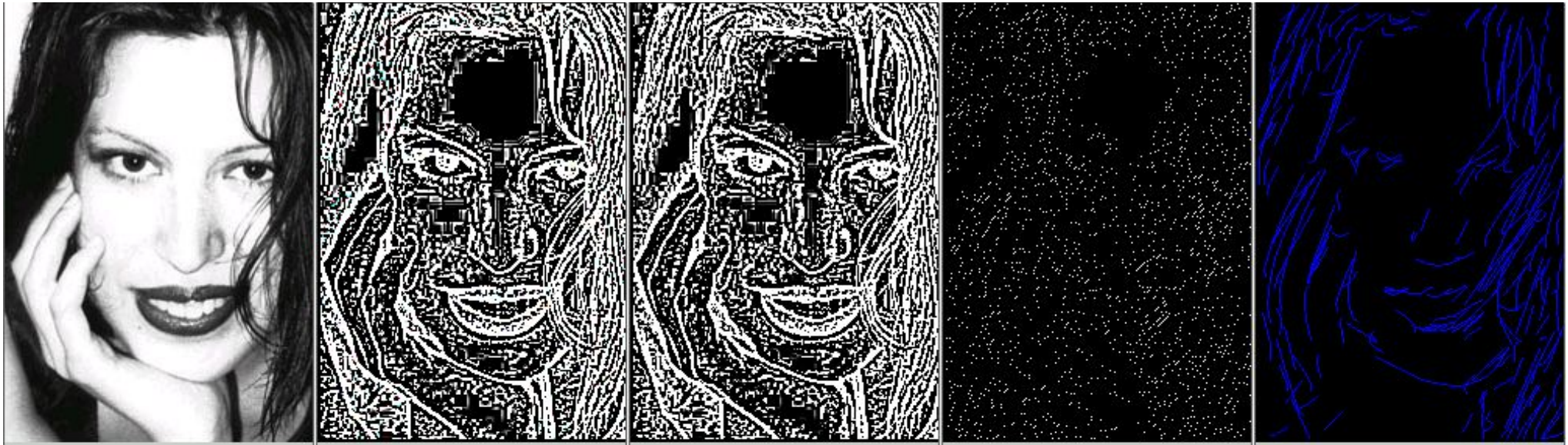
NTSC Input and VGA Output

- Store luminence information in (x,y) addressing
- 320x240x8 input resolution
- 640x480 pixel output

Image Processing

- Edge detection: 2D convolution using a 15x15x16 Laplacian-of-Gaussian FIR filter determined using Matlab
- Curve extraction
 - Pick starting pixel and follow continuous edges
 - Store as 68-bit objects with {begin, end, CP1, CP2} where CP1 and CP2 are Bezier control points
- Caricaturize: extend CPs from center of image

Proof Of Concept



Printing

- Convert curve objects into PostScript format
- Talk to printer using standard parallel port
- Post-processing of curves, including thresholding by estimated curve length

Questions?