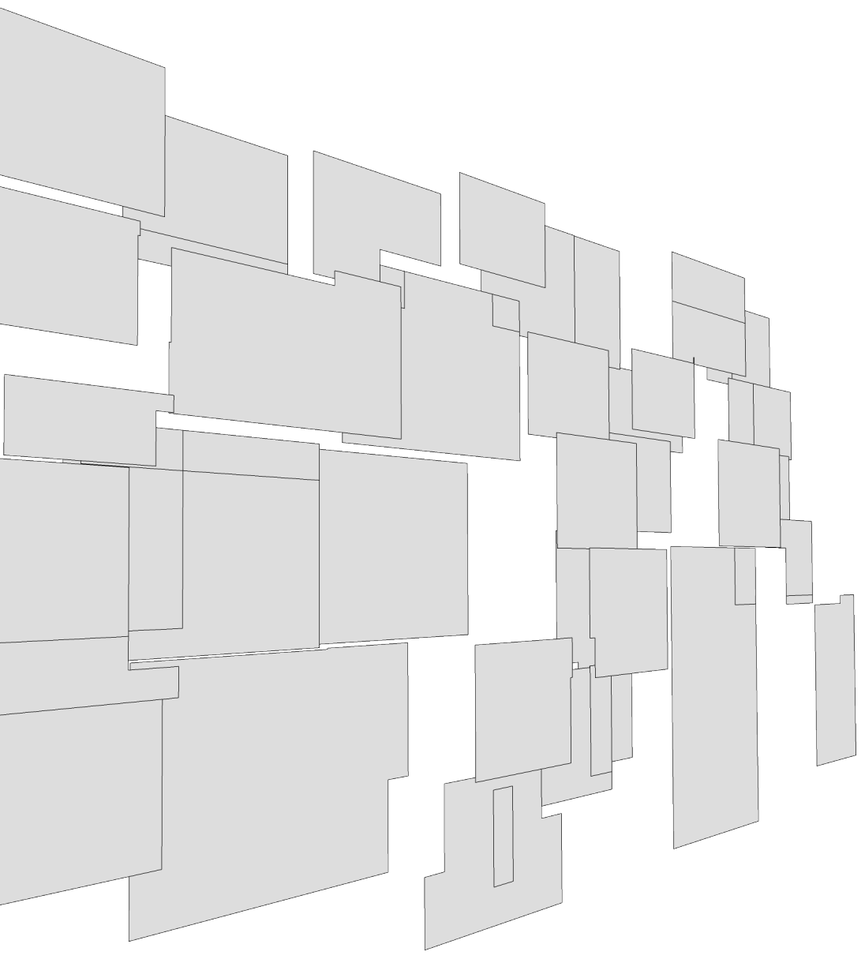
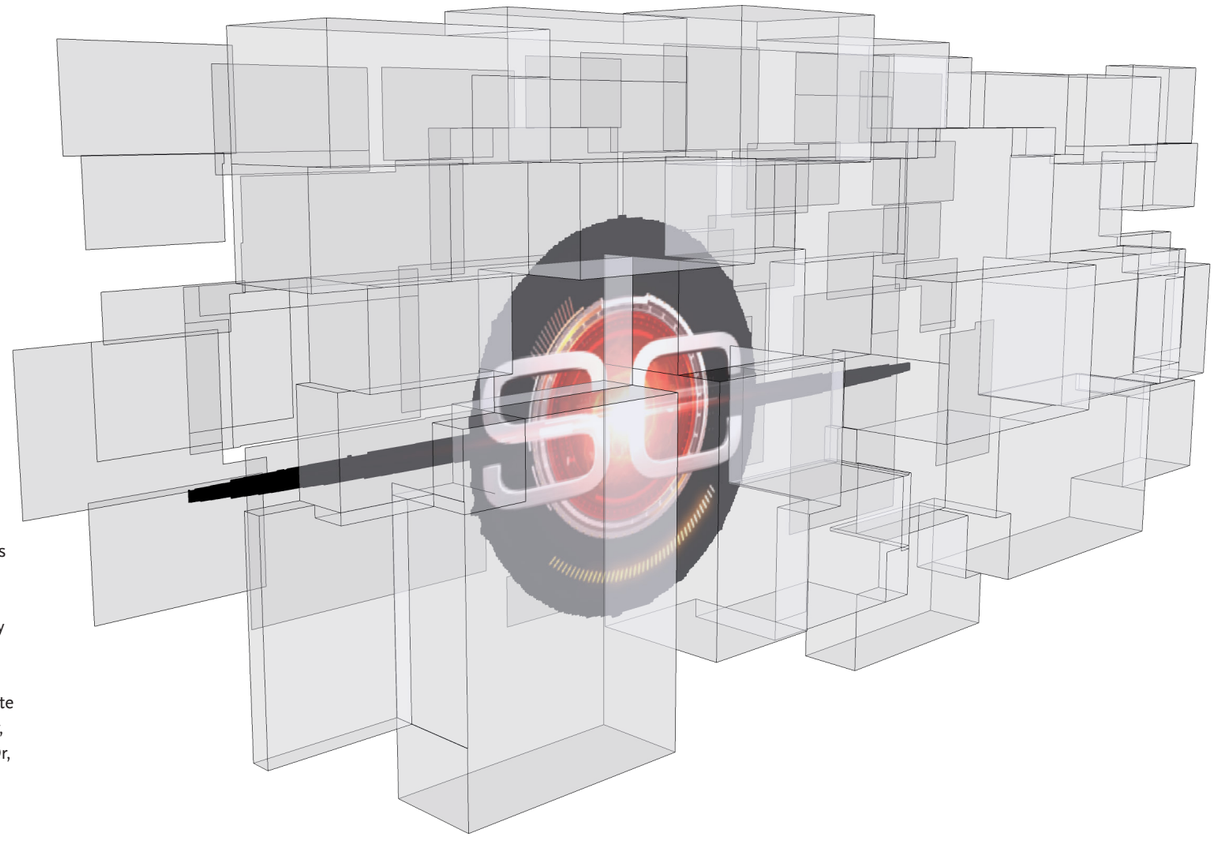


L O O M

LOOM EXECUTIVE SUMMARY

A NEW SUBSTRATE THAT UNITES OUR SPACES AND PIXELS



FEATURE SET

- pixels from any source in any composition on any number of displays controlled by the Loom, in any conceivable orientation, location, regardless of whether or not the displays are projectors, monitors, LED walls, or virtual cameras. Displays, physical or virtual, are completely decoupled from any dependencies on routing or rendering (eg. the Loom can see a Viz source of pixels just as it sees a file animation from disk or an SDI stream from brainstorm)
- Bezel-less treatment of all sources
- use content of any framerate, size or resolution at the same time, whether it be 4k or 2k or some custom format
- build with full uncompressed SDI sources as well as files from disk, animation sequences, MOV's, web streams over rtsp --- all exist on par with eachother in the Loom
- realtime spanning of an arbitrary number of physical displays
- full physical display orientation flexibility in realtime
- all 2D Transformations, realtime, any source, any physical display or combination of
- all 3D Transformations, realtime, any source, any physical display or combination of
- every pixel is spatially aware (rooted in a shared 3-space world)
- No physical monitor limitations
- Router integration
- no display is bound to specific sources
- one screen-space for all displays
- all router sources (R-OUTS) made available anywhere, anytime, in any number
- full-range alpha blending on any number of sources on any number of displays for realtime layering, keying, fades, transitions, etc.
- anywhere, anytime, full variable opacity without any unique routing requirement
- animations on sources and within sources
- capable of using 3-d gestures in space to manipulate scene content (eg. pointing at a source in a display, "grabbing" it, and dropping it in another display. Or, controlling transitions from one source to another via touch, for example.)

BULLET-PROOF INDUSTRY STANDARDS

- Linux
- OpenGL 3+

COST

- free operating system
- commodity hardware

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LOOM CONTROL CAPABILITIES 1.0

THINGS, OPERATIONS AND WAYS TO MANIPULATE PIXELS ON THE LOOM FOR RELEASE 1.0

THINGS

QUADS
IMAGE
VIDEO
MULTI
SPAN

GROUPS
STANDARD/UN-ORDERED
GRID
STACK
PILE
FAN

WIPER
MESH (CUSTOM, NON-PLANAR VERTEX GEO)
CAMERA (VIEWPOINT FROM WHICH A FELD IS RENDERED)

OPERATIONS ON THINGS

TRANSFORMS
TRANSLATE
ROTATE
SCALE
COLOR
RELATIVE ORDER IN Z (SPACE LAYERING)

SCENEGRAPH
CULL (HIDE / SHOW)
ADD/REMOVE
GROUP/UNGROUP
RELATIVE ORDER IN DRAW (SEQUENCE LAYERING)

WAYS TO OPERATE ON THINGS

TRANSFORM OPS
COMPOUNDED OF PARENT MATRICES
BY LOCALS (MODEL-SPACE)
HARD (IMMEDIATE)
SOFT (OVER TIME. AKA."ANIMATED")
DELAYED

SCENEGRAPH OPS
DELAYED

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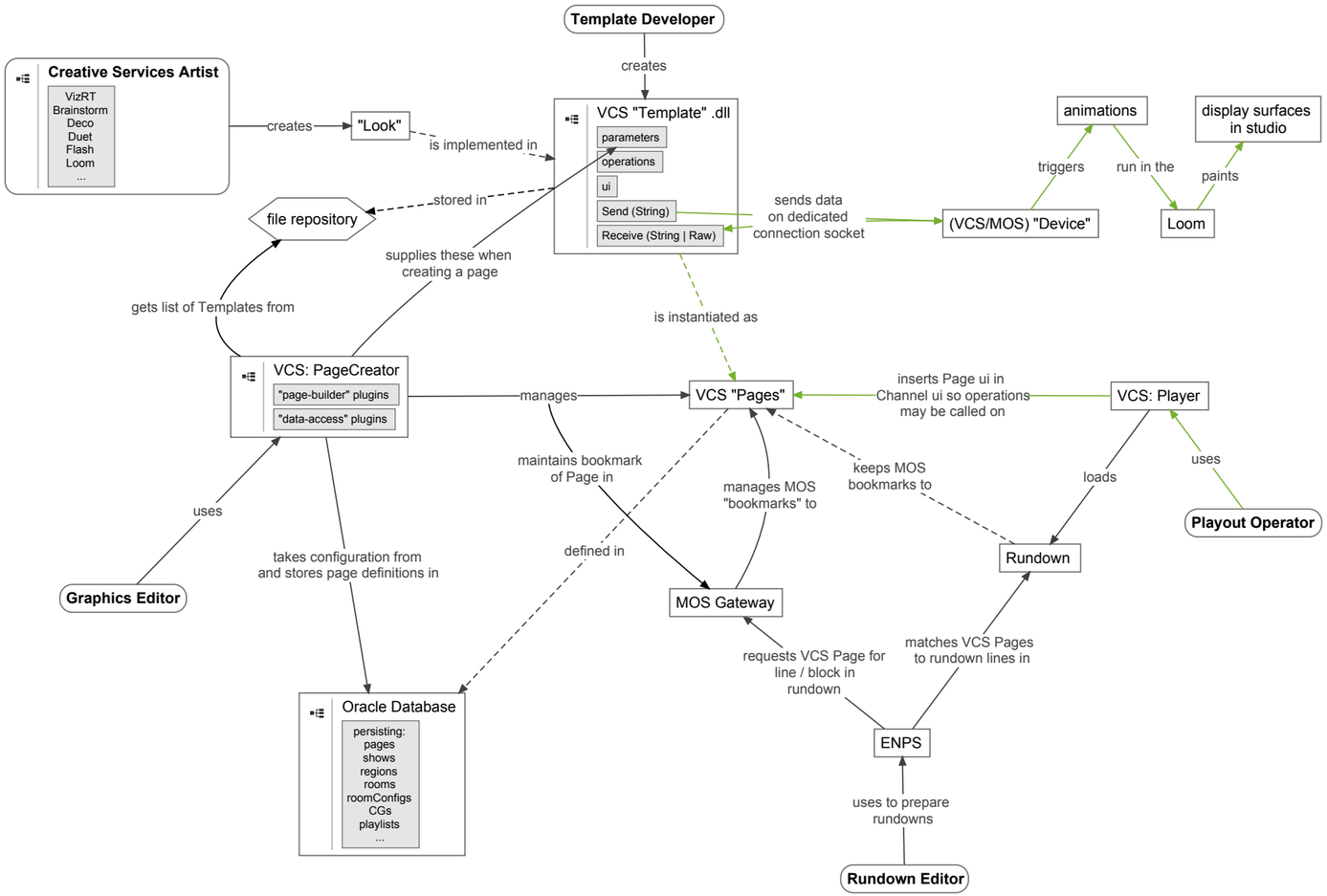
HIGH-LEVEL COMPONENTS

THE LARGEST FUNCTIONAL PIECES OF SOFTWARE IN THE LOOM

L O O M

PRODUCTION CONTROL WORKFLOW

HOW PRODUCTION REQUIRES THE LOOM TO BE CONTROLLED



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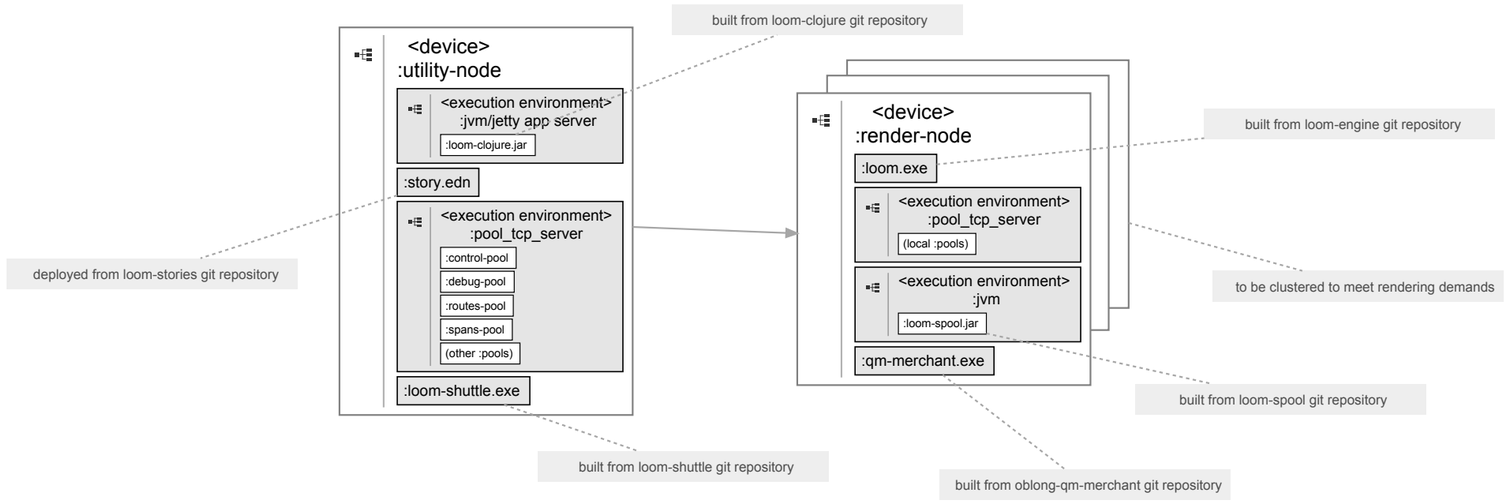
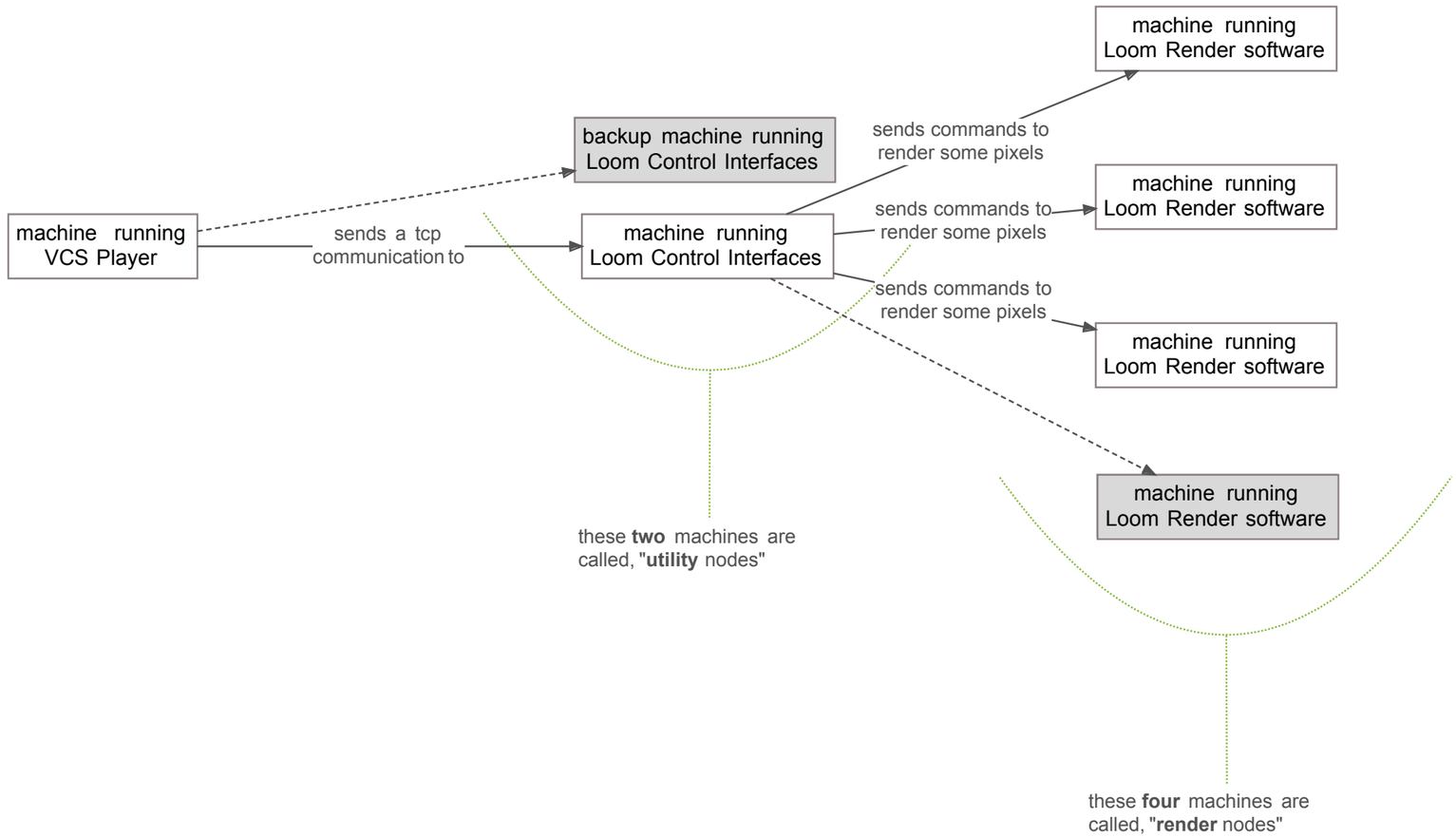
DEPLOYMENT

SOFTWARE COMPONENTS AS DEPLOYED. UML2.0



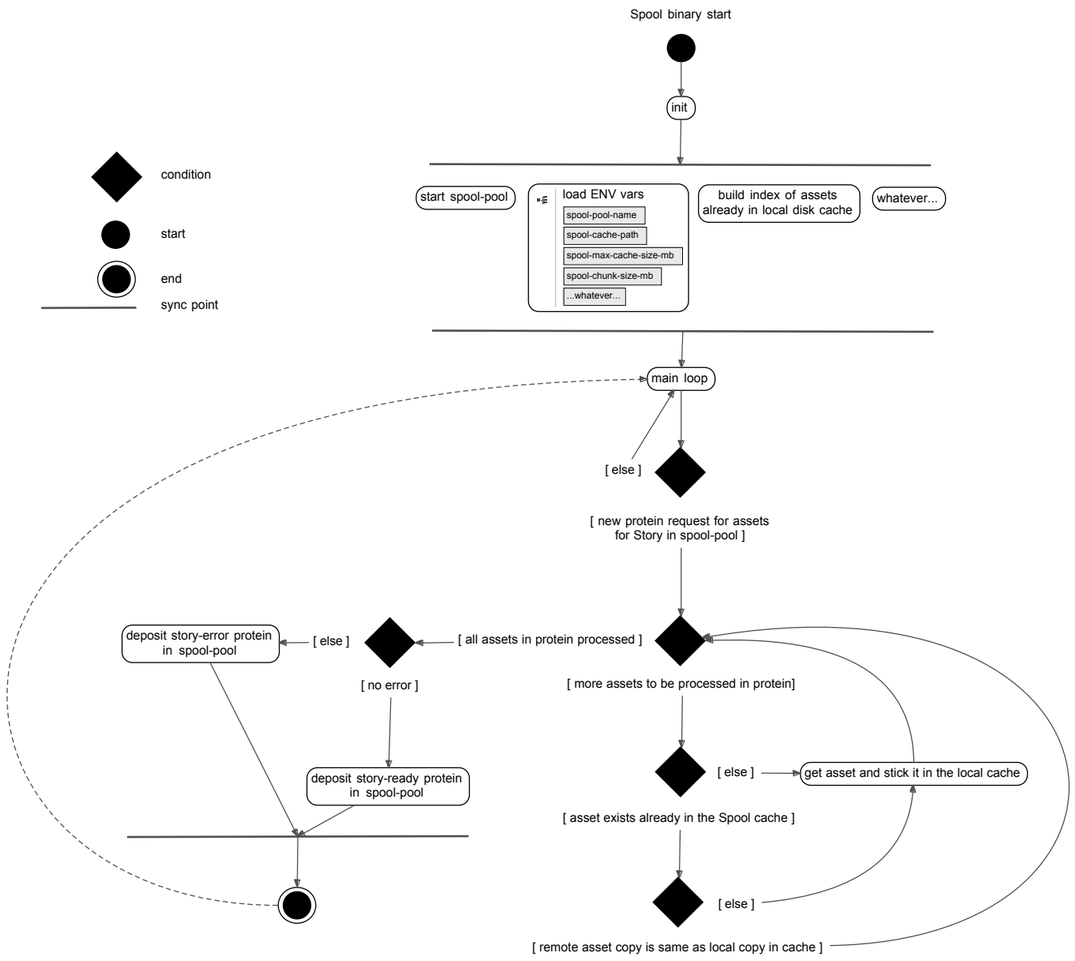
HARDWARE

HIGHEST-LEVEL DEPICTION OF COMPUTING MACHINERY



SPOOL. LOCAL ASSET CACHE

GETTING IMAGE ASSETS INTO LOCAL RENDER ON-DISK CACHE



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