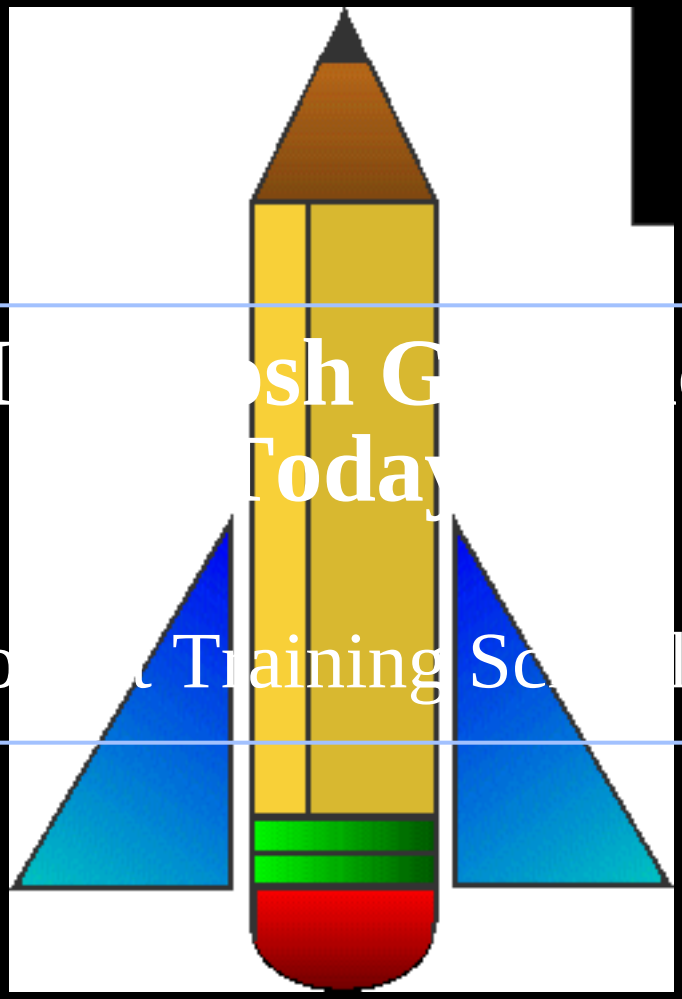
Jean-Charles Mourey

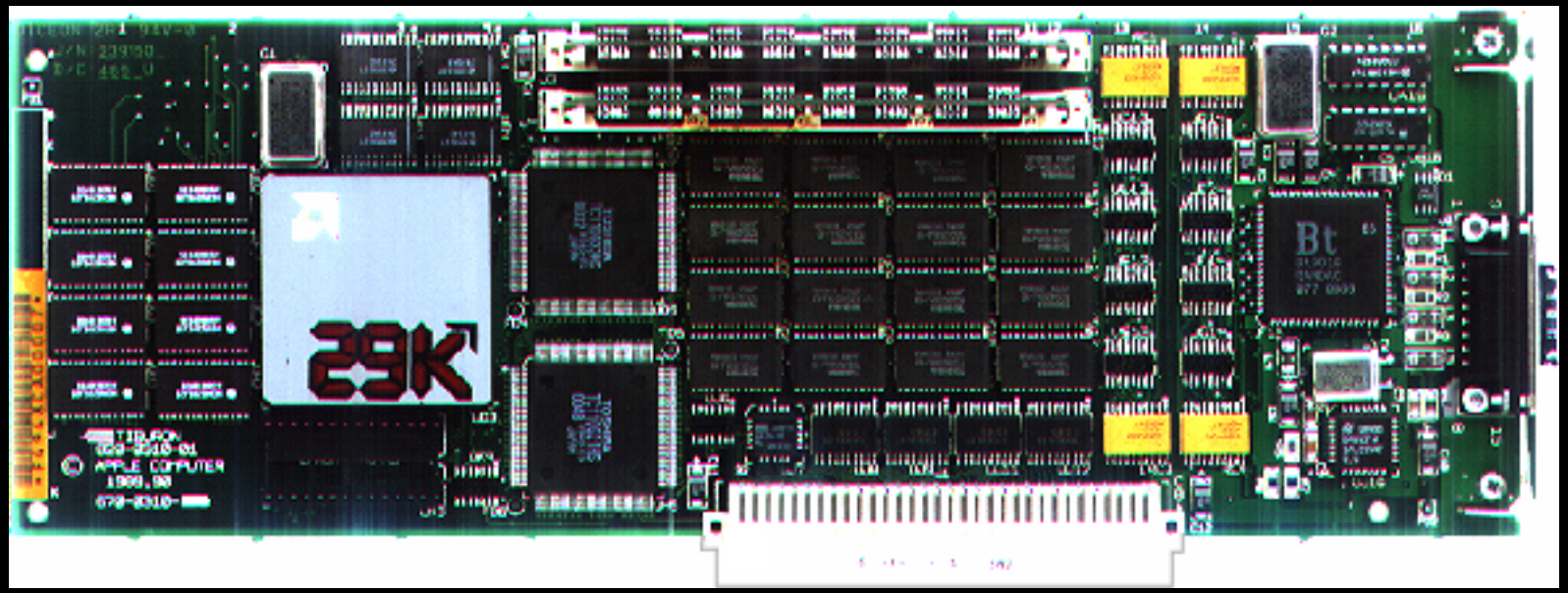
System Extension Group
“Chief Rocket Scientist”

M sh G cs Today

Ro t Training Sc l



Macintosh Display Card 8•24 GC



Inside The 8•24 GC - What...

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- Active even without monitor connected

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- Up to 24 bits per pixel on 640 x 480 displays
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- Photo quality in color or grayscale
  - 16 million colors
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- NTSC and PAL timing support
  - Breakout box required for compositing

Inside The 8•24 GC - Hardware

How It Works...

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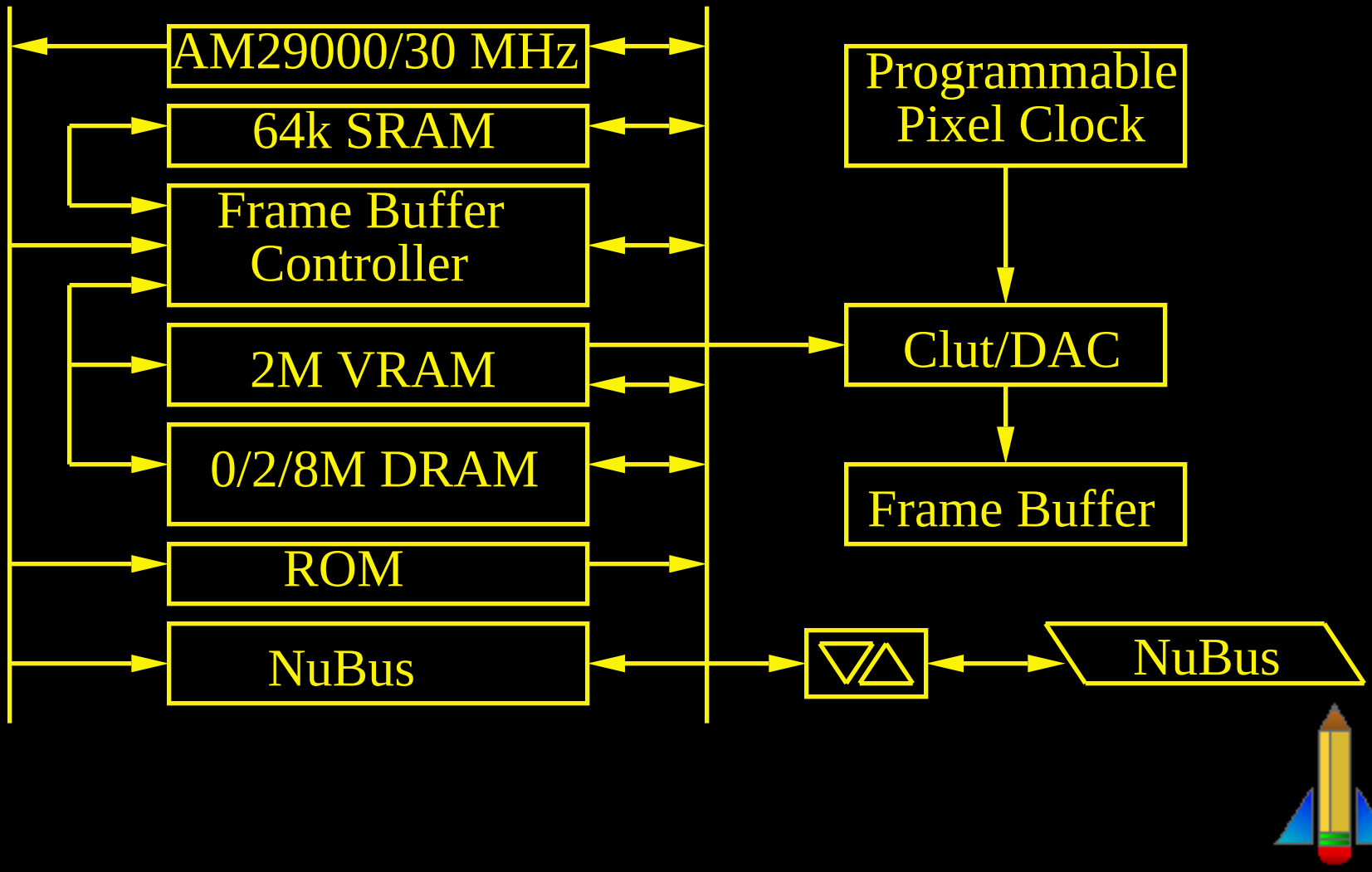
Block Diagram of the 8•24 GC Card



Inside The 8•24 GC - Software

“Magic” Components

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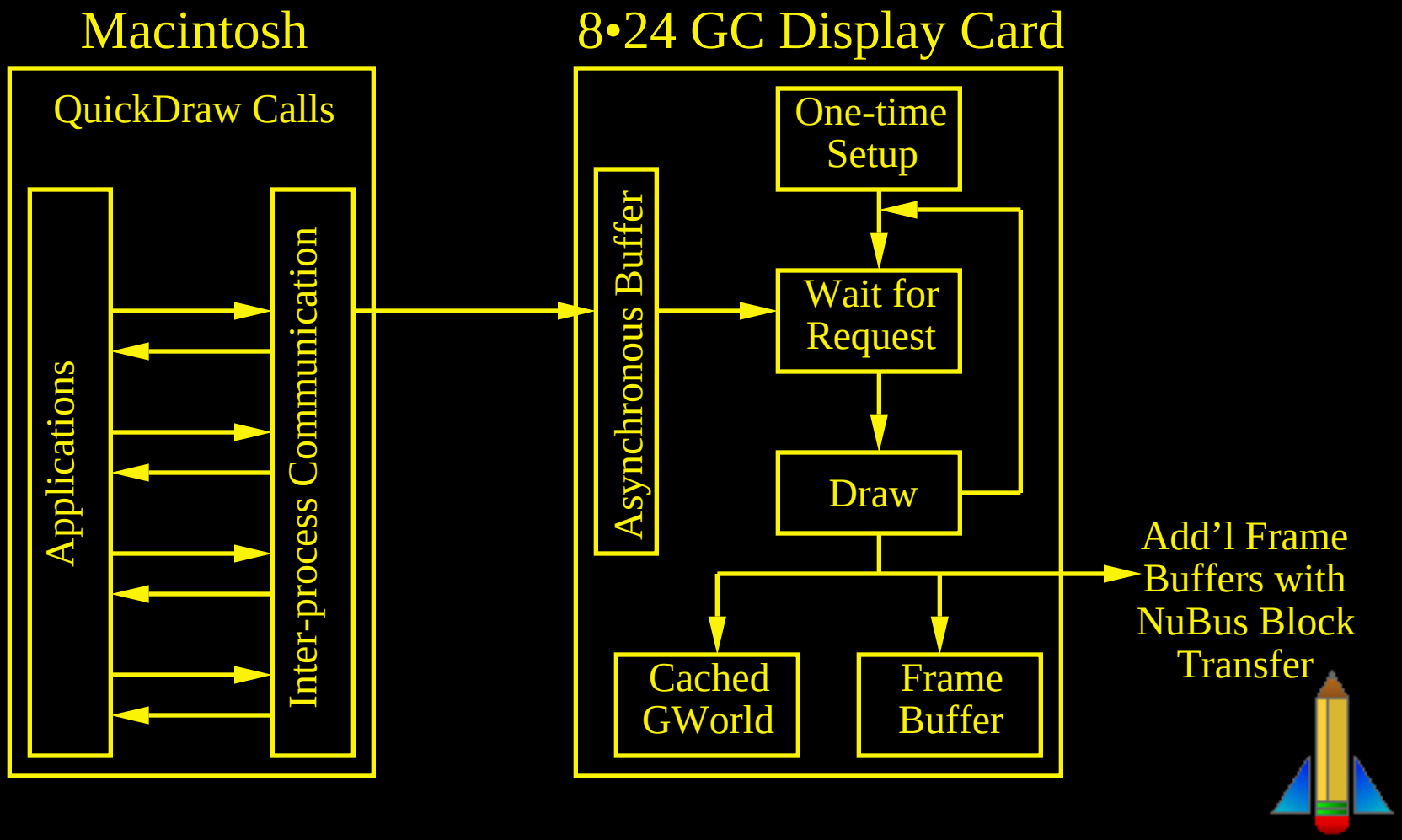
- Communicates via IPC and async queue

Software Architecture of 8•24 GC Card



Inside The 8•24 GC - Applications

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  - You know who you are...

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How To Write Yours...

- Follow the guidelines
- Don’t change the structures directly
- Don't draw directly to the screen
- Don't rely on the speed of CPU for animation

Inside The 8•24 GC - Applications

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- Use PixPatChanged, CTabChanged, etc.

Inside The 8•24 GC - Applications

How To Write Yours...

- Use PixPatChanged, CTabChanged, etc.
- The GC software caches:
  - Color tables, GDevices, GWorlds
  - PixPats, fonts, width tables, and more...

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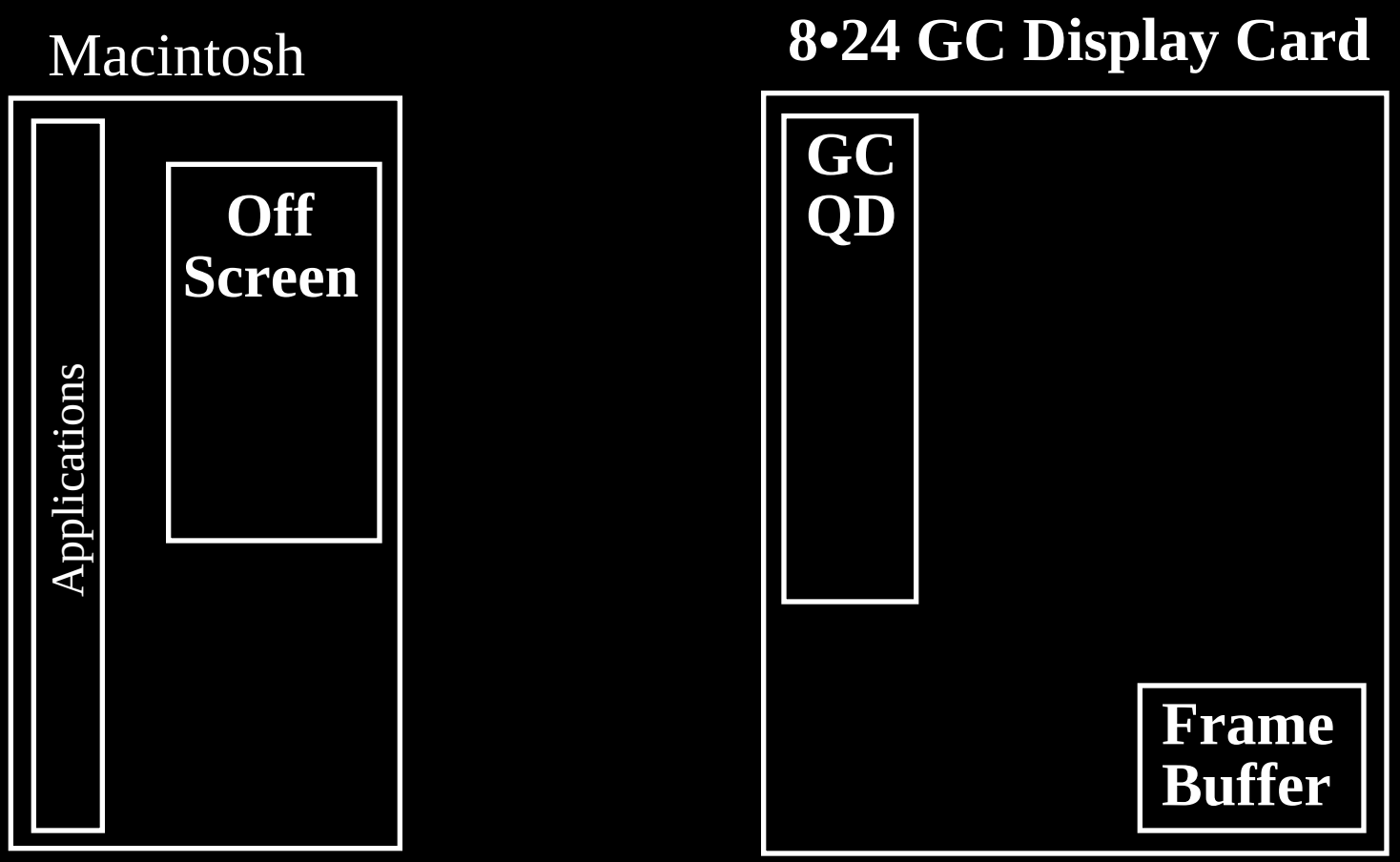
- Offscreens: Old-Style and GWorlds

Offscreens: No Parallelism - Old-Style



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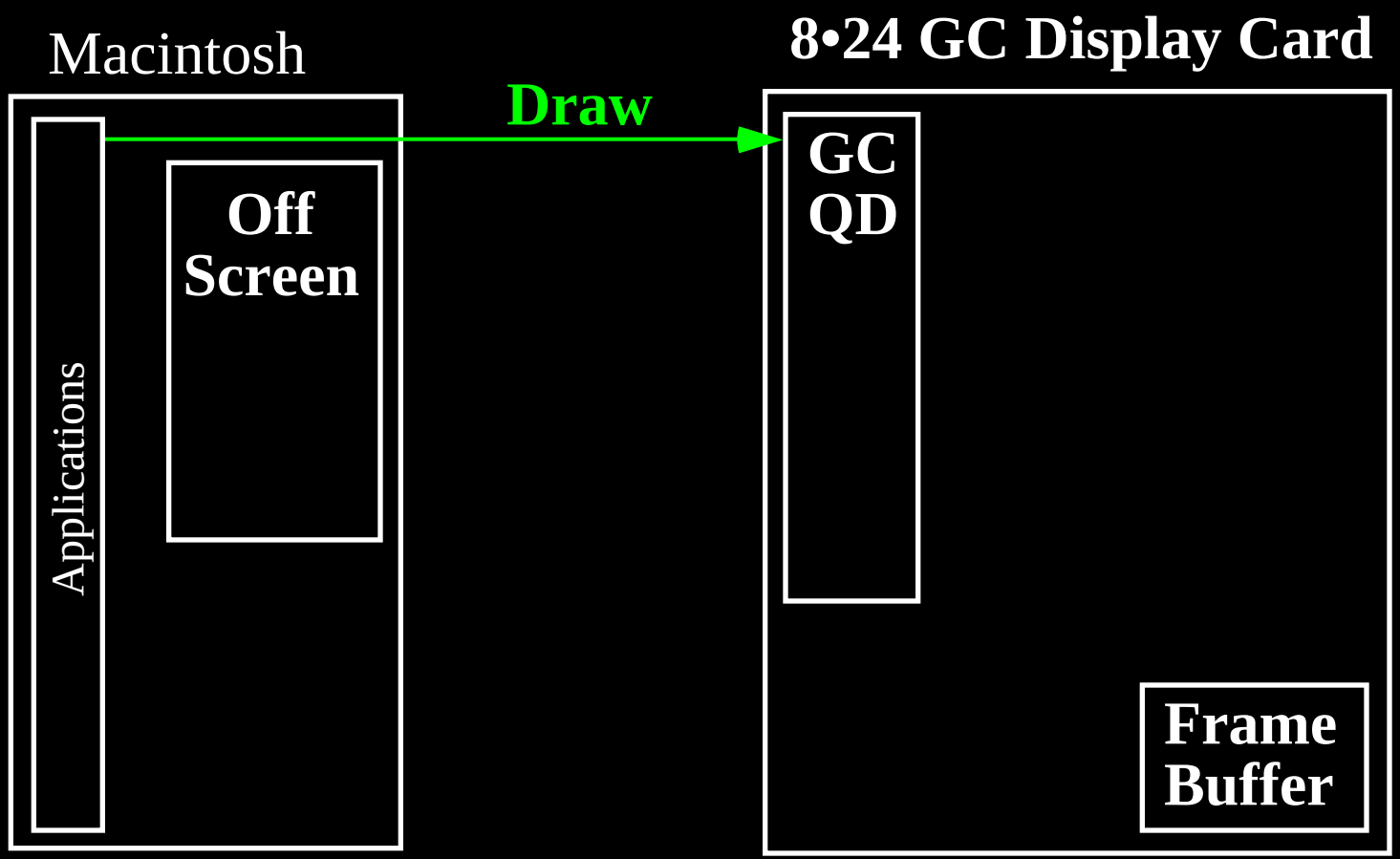

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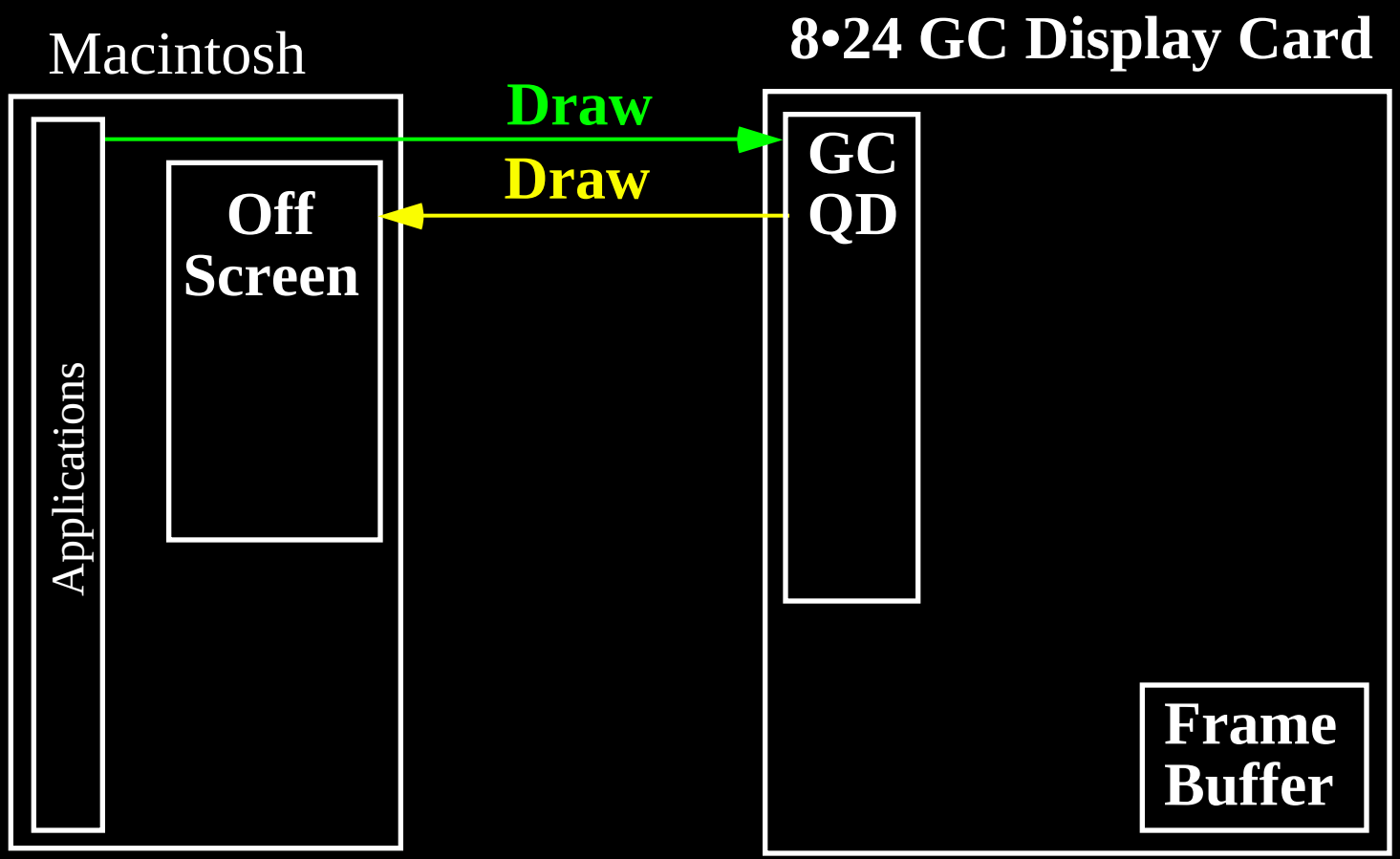

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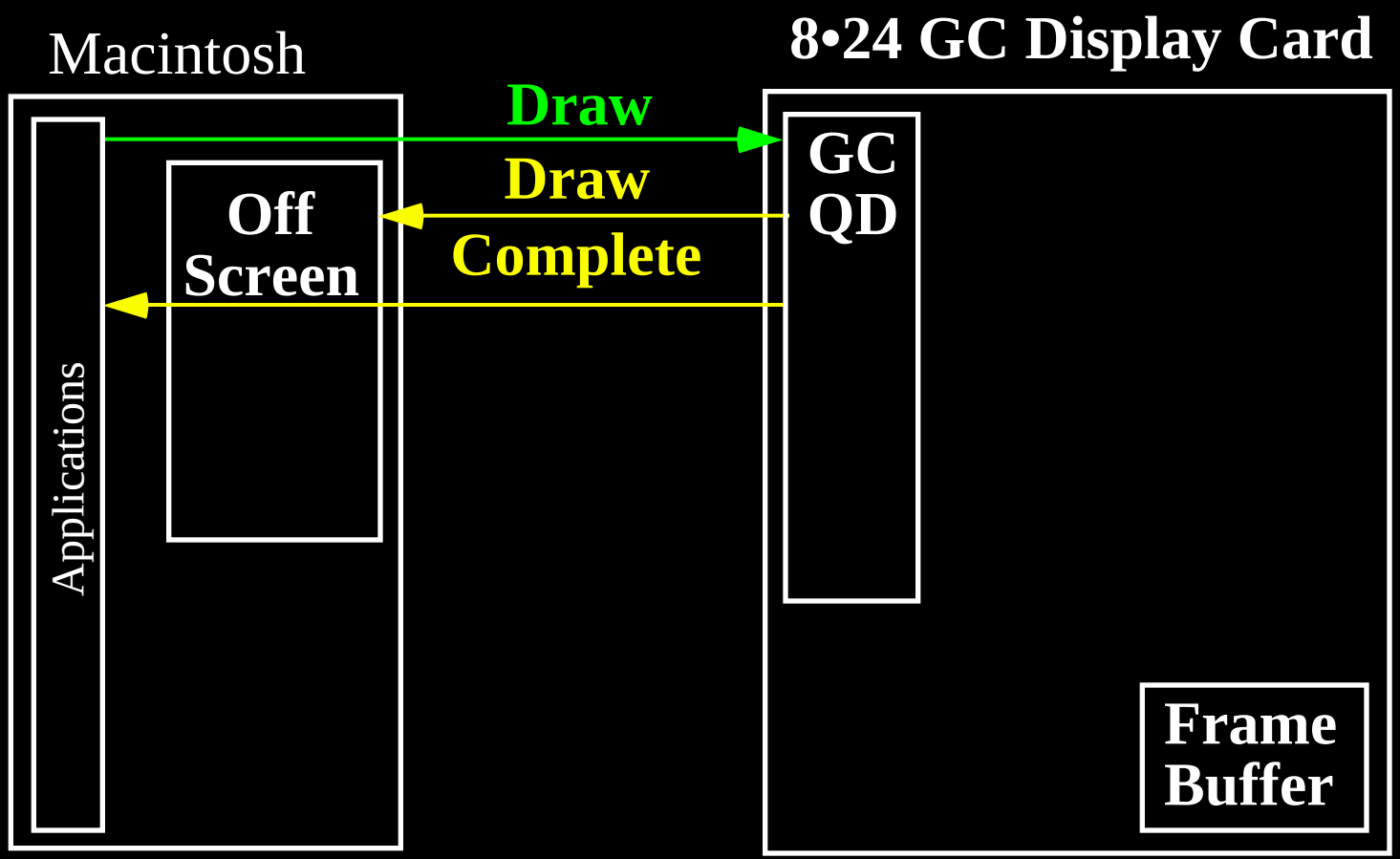

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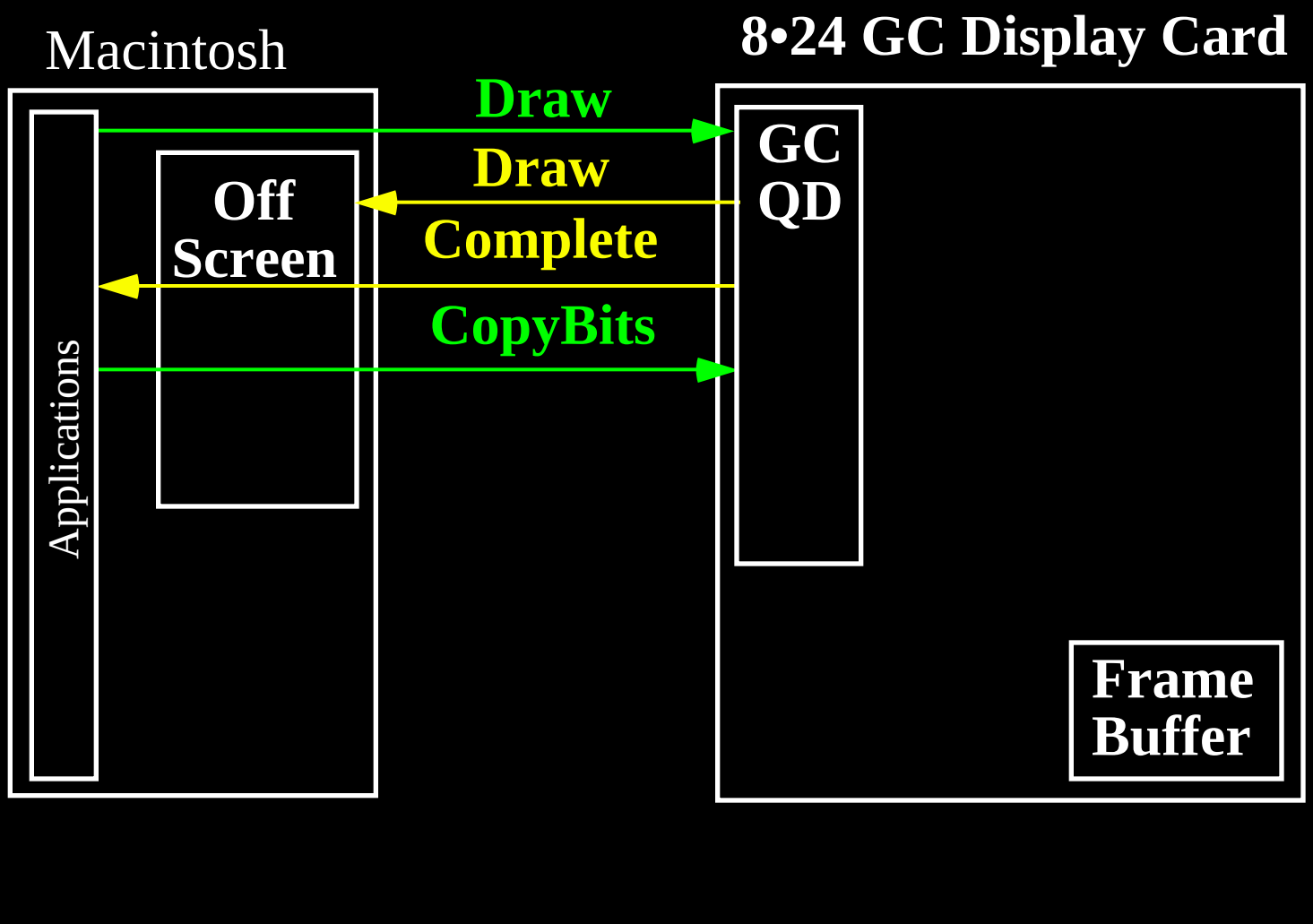

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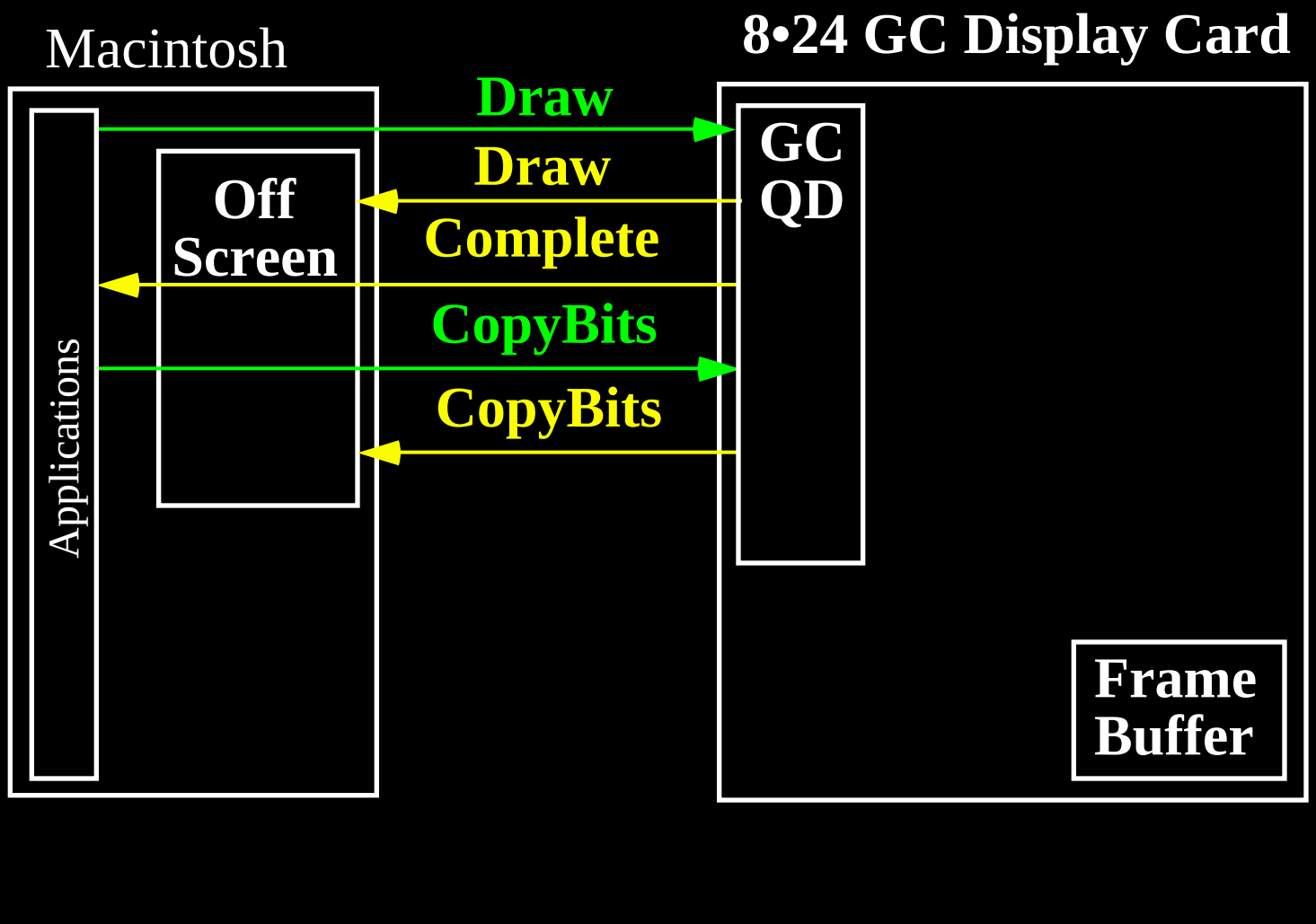

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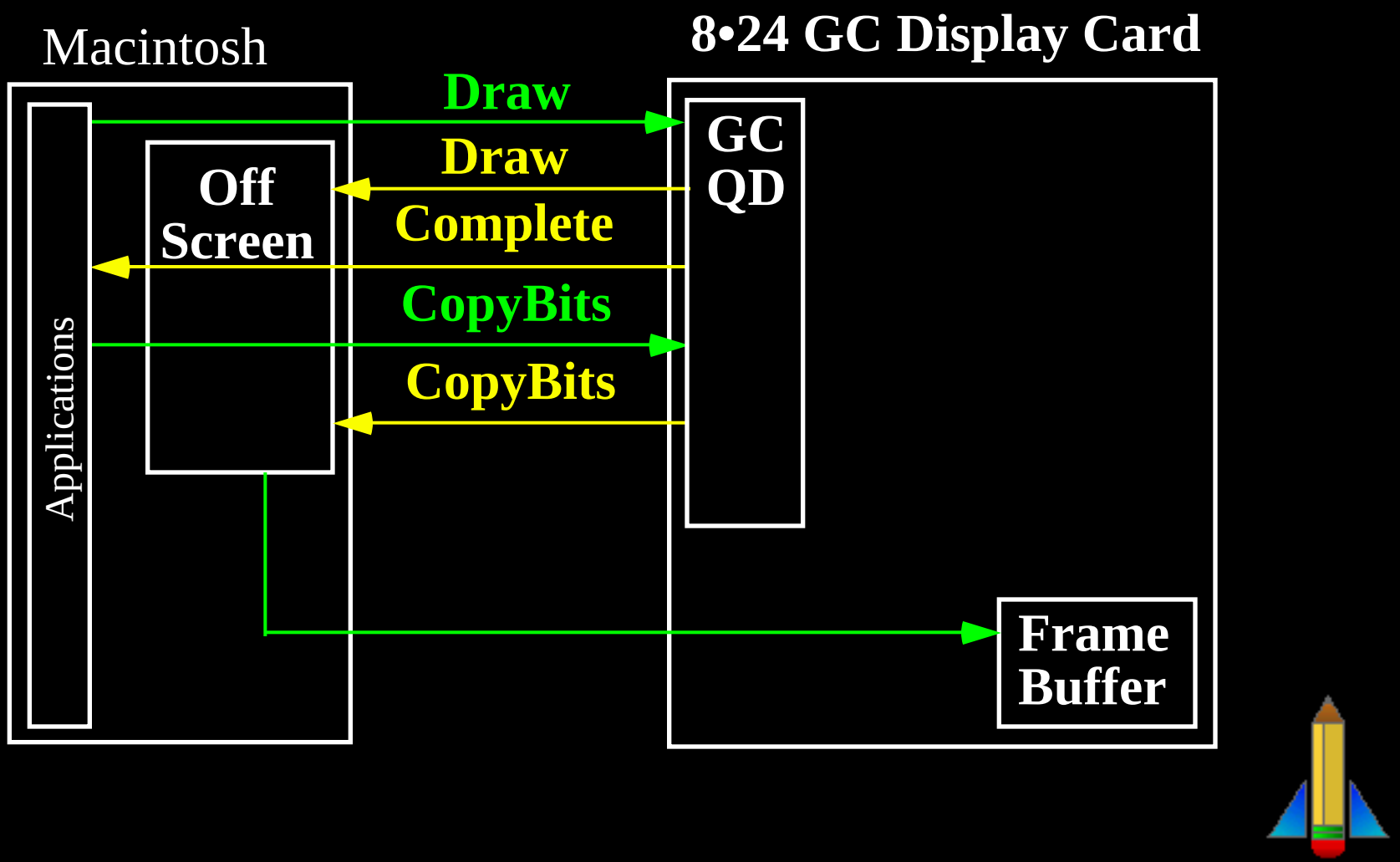
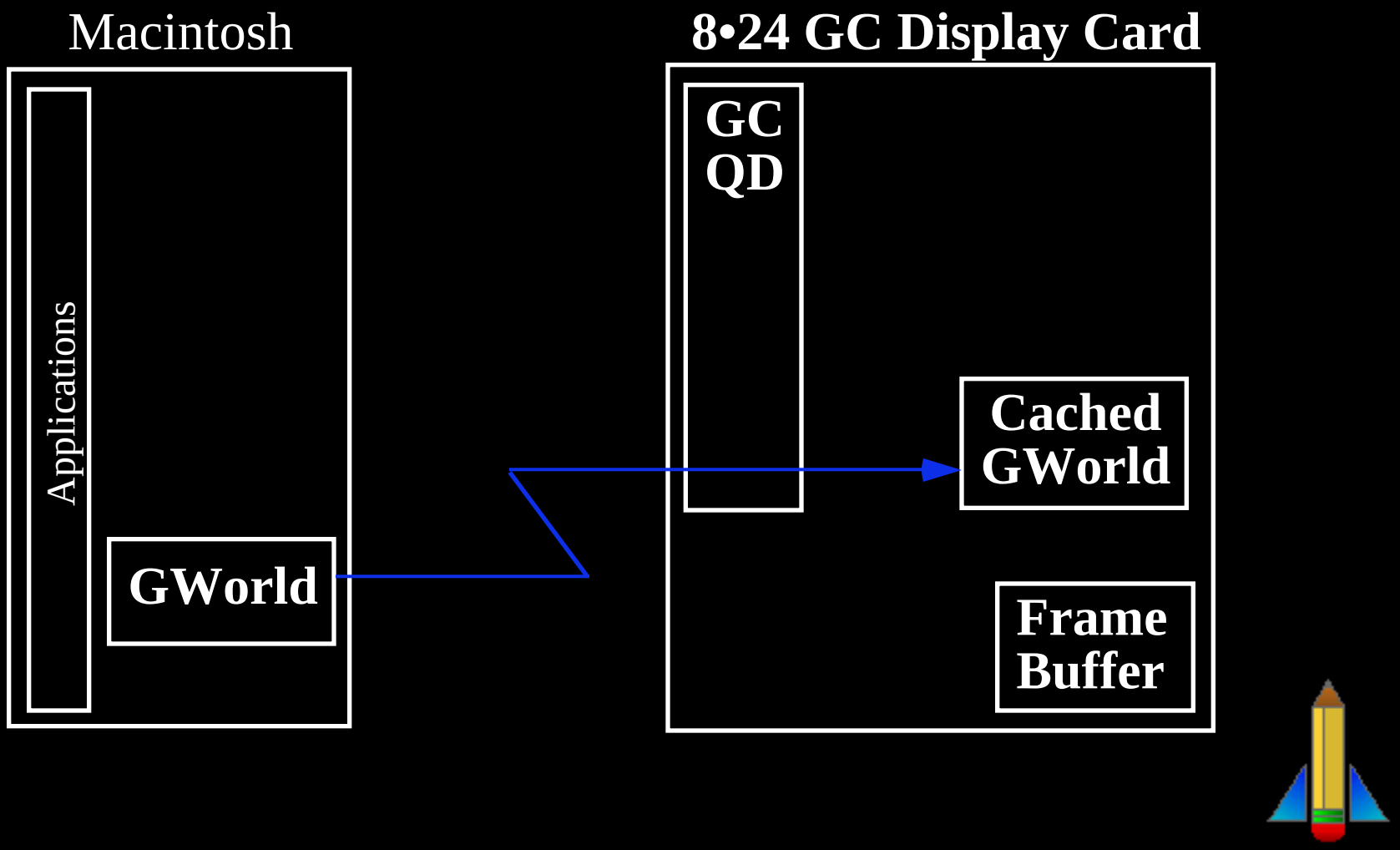


Offscreens: Parallelism - GWorlds



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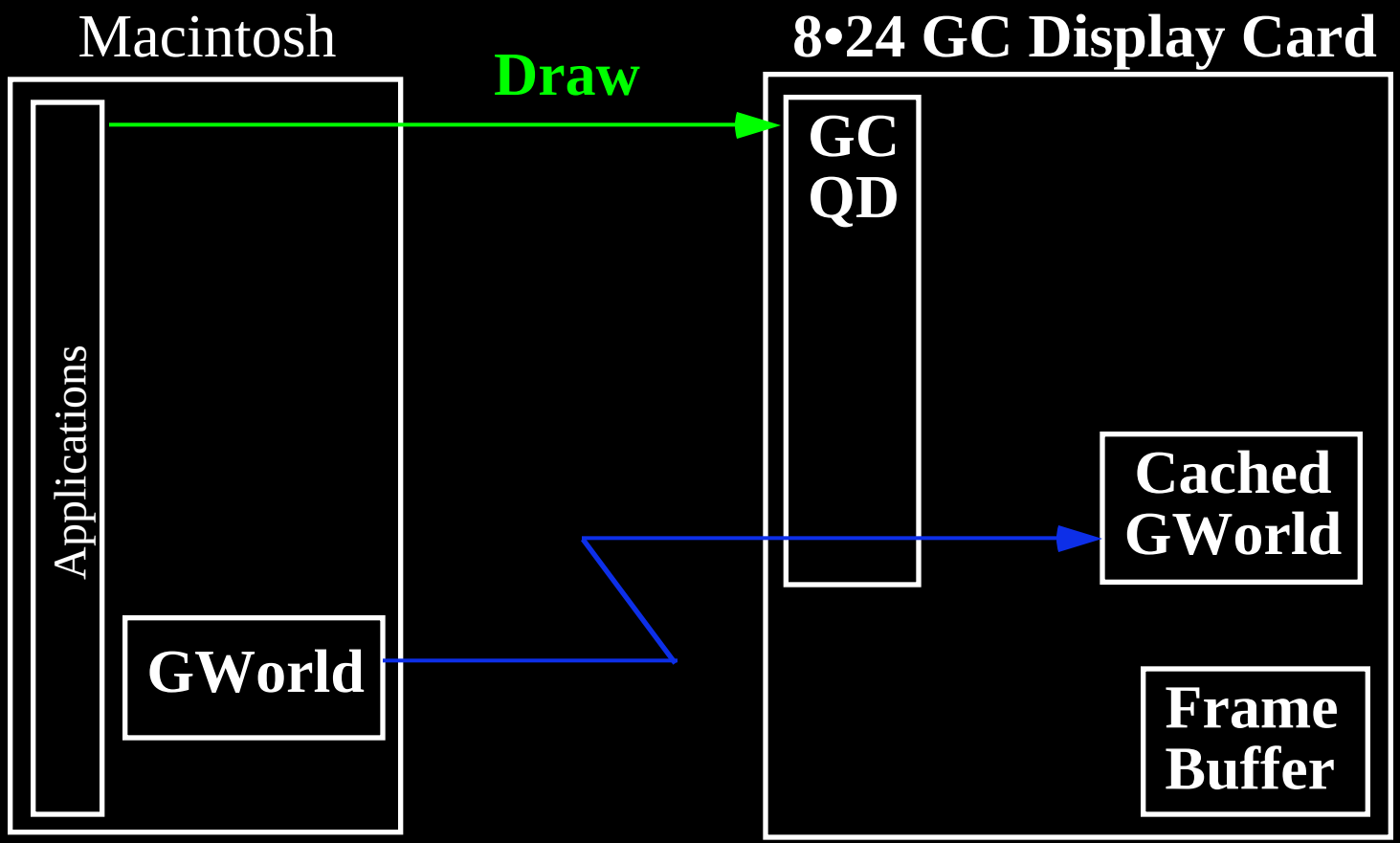

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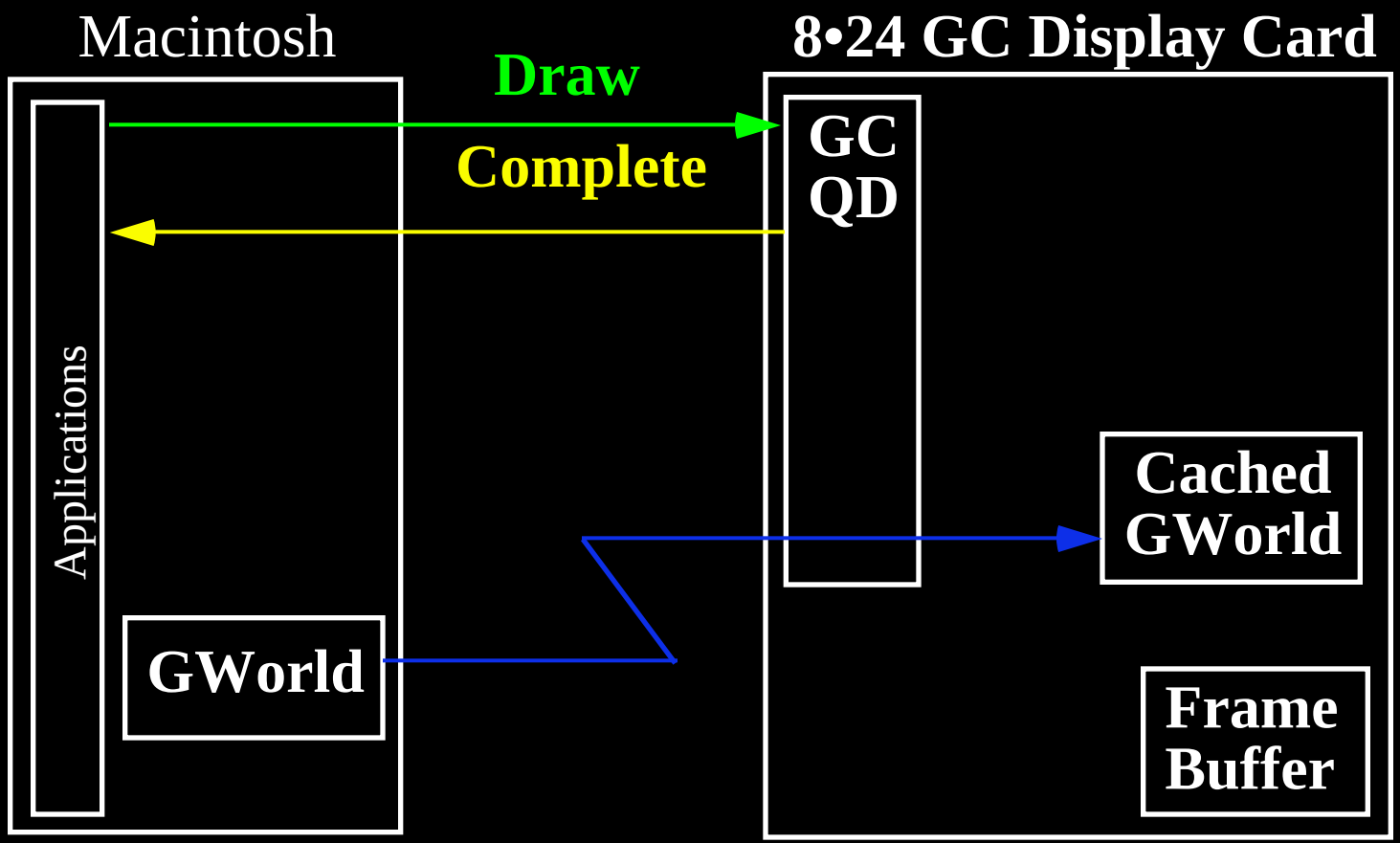

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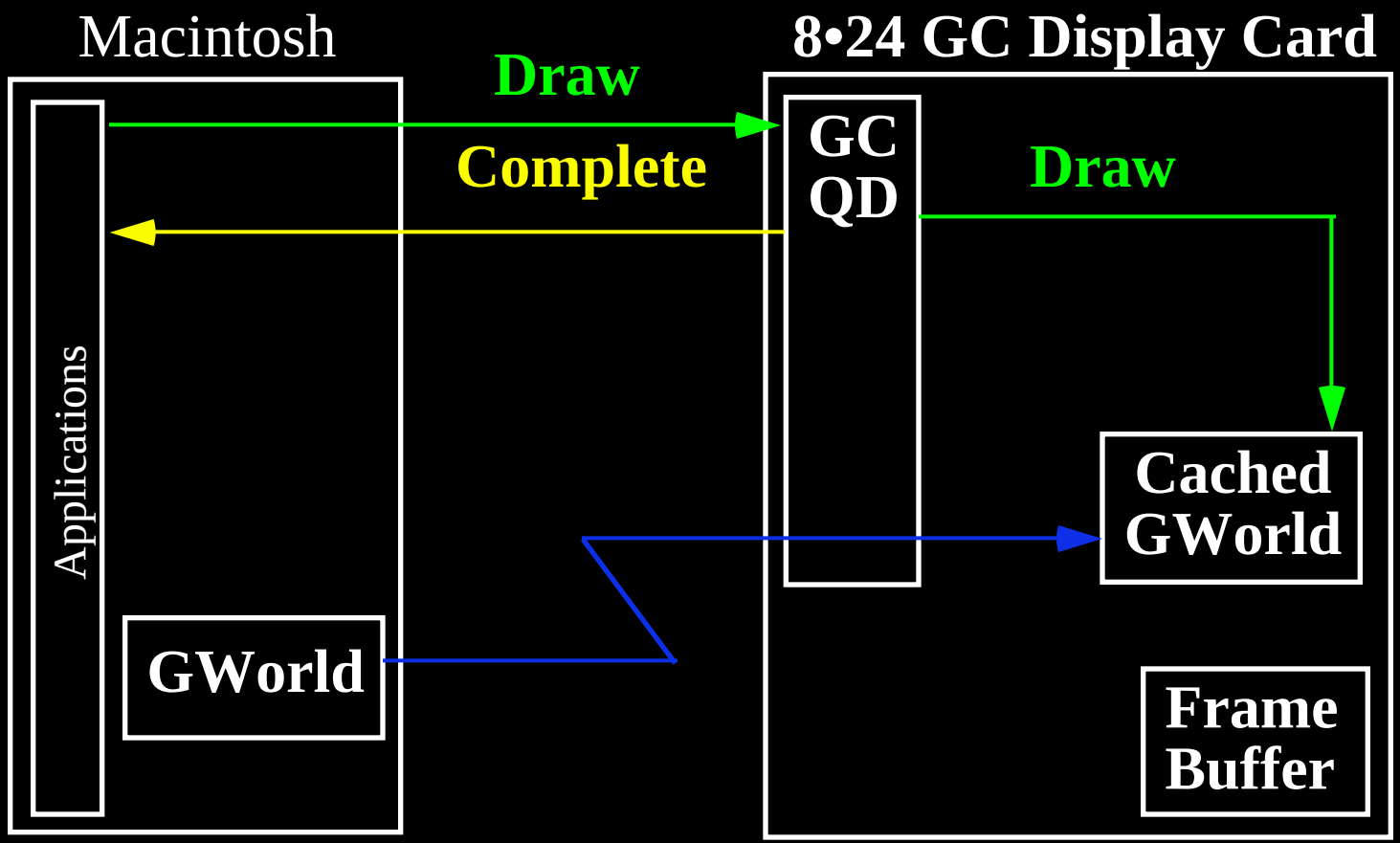

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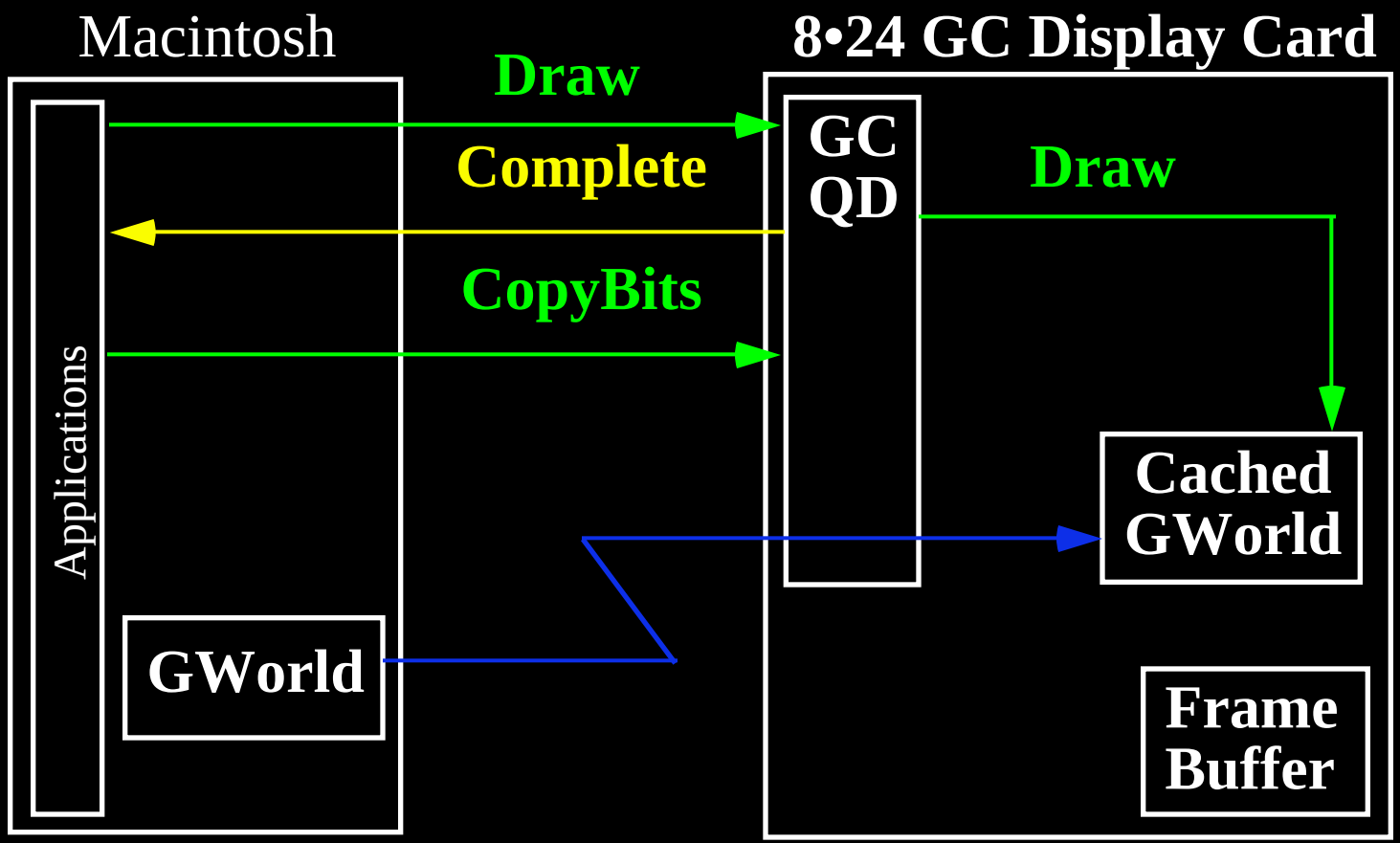

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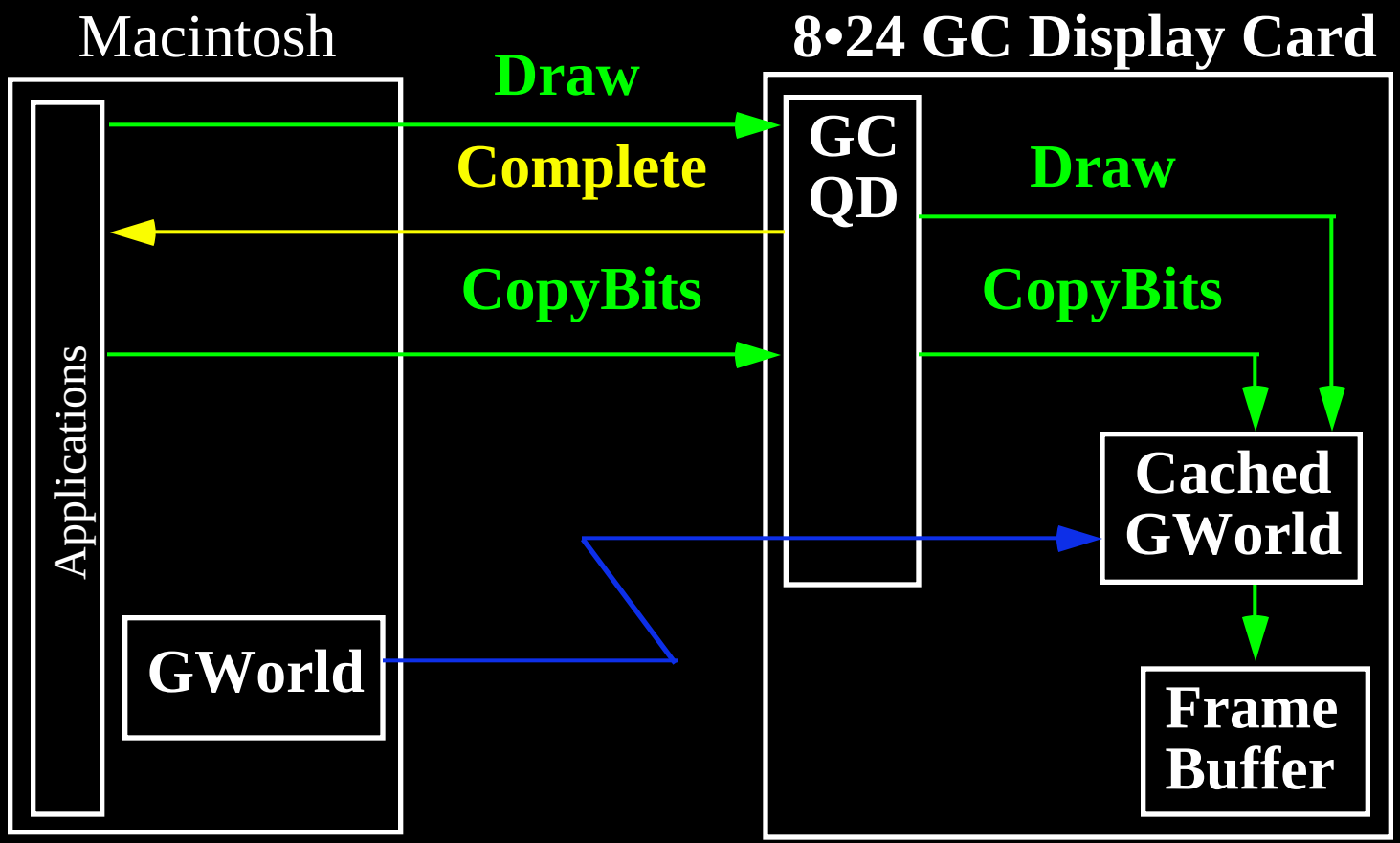

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- GetPixBaseAddr call
- QDDone(GrafPort) call

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Message to Hardware Developers...

- Implement block transfer
  - Slave mode as a minimum
  - Master mode for intelligent cards

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  - Master mode for intelligent cards
- Especially frame buffers and memory cards