#15: Act 1 - Remaining Bits
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Wade Fagen-Ulmschneider

PNG File Format
When we discussed the PNG file format, there's a few bits of brilliance in the format that is definitely worth covering:

1) PNG Header:

0x	89	50	4e	47	0d	0a	1a	0a

`0x89`:

`0x50 4e 47`:

2) Endianness:

Section 2.1: All integers that require more than one byte must be in network byte order: the most significant byte comes first, then the less significant bytes in descending order of significance (MSB LSB for two-byte integers, B3 B2 B1 B0 for four-byte integers)

"Big Endian":

"Little Endian":

```
15-bits/endianness.c

5   int i = 42;
6   unsigned char *s = (unsigned char *)&i;
7   printf("%d %d %d %d\n", s[0], s[1], s[2], s[3]);
```

What do we expect for the output for various endian systems?

Processing vs. Thread: Process Isolation
Originally, programs would run as a single process. Consider a single web browser window:

Today, every tab runs as its own process:

...and this doesn't just apply to web browsers:

...what if we need even more isolation?

The Second Act: Computer Systems in the Cloud!