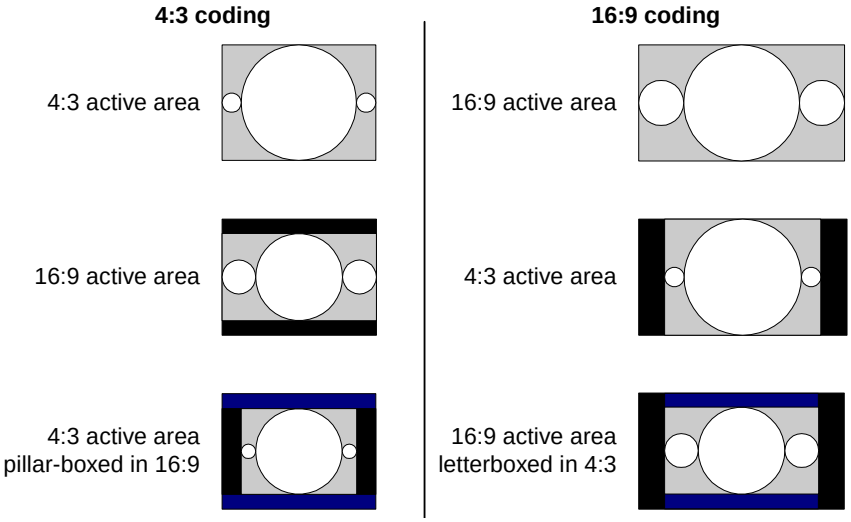
4:3 coding
16:9 coding
4:3 active area
16:9 active area
4:3 active area
pillar-boxed in 16:9
16:9 active area
4:3 active area
16:9 active area
letterboxed in 4:3

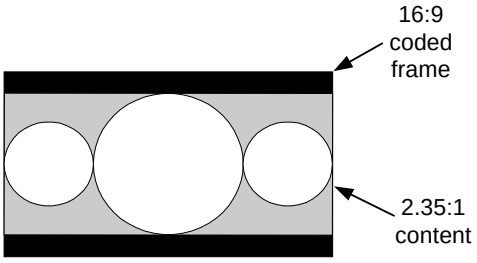

Figure 5.9 Example of active video area greater than 16:9 aspect ratio.

It can be helpful for a display to know the actual aspect ratio of the active portion of the 16:9 coded frame for a variety of reasons, including:

- Reduction in the effects of uneven screen aging. The display device controller may wish to use gray instead of black for the bars.
- The display may offer the user a “zoom” option to make better use of available display area, and knowledge of the aspect ratio can automate the selection of this display option. The zoom feature can be vertical scaling only, or a combination of horizontal and vertical where the leftmost and rightmost portions of the image are sacrificed to fill the screen area vertically.

Several standards include aspect ratio data. The MPEG-2 video syntax includes horizontal and vertical size data and aspect ratio indication of the coded image. An NTSC signal is normally thought to be intended for 4:3 display, but this is not always the case. EIA-608-B includes a “squeezed” bit, and IEC 61880 defines a method for NTSC VBI line 20. The line-20 method is currently used for playback of anamorphically coded DVDs, when the DVD player supports it and is properly set up by the user.