|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| File Name | LZW Comp.  (kb) | LZWmod (Do Nothing Mode)  Comp.  (kb) | LZWmod  (Reset  Mode)  Comp.  (kb) | LZWmod  (Monitor  Mode)  Comp.  (kb) | Original file size  (kb) | Comp.  Ratio  For  LZW | Comp.  Ratio  For  Do Nothing | Comp.  Ratio  For  Reset | Comp.  Ratio  For  Monitor |
| Assig2.doc | 78 | 40 | 40 | 40 | 90 | 1.153 | 2.25 | 2.25 | 2.25 |
| Code.txt | 31 | 24 | 23 | 23 | 70 | 2.26 | 2.917 | 3.043 | 3.043 |
| Code2.txt | 24 | 20 | 20 | 20 | 55 | 2.29 | 2.75 | 2.75 | 2.75 |
| Edit.exe | 251 | 156 | 155 | 155 | 236 | 0.94 | 1.513 | 1.523 | 1.523 |
| Frosty.jpg | 177 | 164 | 162 | 162 | 127 | 0.718 | 0.774 | 0.784 | 0.784 |
| Gone\_fishing.bmp | 9 | 9 | 9 | 9 | 17 | 1.889 | 1.889 | 1.889 | 1.889 |
| Lego-big.gif | 129 | 122 | 122 | 122 | 93 | 0.721 | 0.762 | 0.761 | 0.762 |
| Large.txt | 599 | 498 | 493 | 493 | 1200 | 2.003 | 2.41 | 2.434 | 2.434 |
| Medium.txt | 13 | 12 | 12 | 12 | 25 | 1.923 | 2.083 | 2.083 | 2.083 |
| Wacky.bmp | 4 | 4 | 4 | 4 | 922 | 230.5 | 230.5 | 230.5 | 230.5 |
| Winnt256.bmp | 159 | 63 | 63 | 63 | 157 | 0.987 | 2.492 | 2.492 | 2.492 |
| All.tar | 1,847 | 1,092 | 738 | 738 | 3031 | 1.64 | 2.776 | 4.107 | 4.107 |

Compression Ratios for 7zip are the following in the same file name order as the table

4.027

5.134

4.246

2.122

1.000

2.125

1.121

2.991

2.389

305.24

3.58

3.654

**Key: Comp. stands for compressed**

It seems like files which had a lot less content seemed to have the best compression ratios for lzw. For example, if you compare wacky.bmp to frosty.jpg, we see that the content for wacky.bmp is very small. Most of the pixels in the image are exactly the same and show little to no difference. However, in the file frosty.jpg, we can see a vivid and stunning image to the eyes. We see a wide variety of colors, and different contrasts. As such, frosty.jpg is a file that has significantly greater entropy than wacky.bmp and that is why we see such a large difference in the compression ratios because files that have greater entropy are a lot more difficult to compress with LZW than files with less entropy.