

Googolplex Written Out

Wolfgang H. Nitsche

The diagram illustrates a data storage structure using two concentric circles of binary digits. The outer circle is labeled 'volume 10000' and the inner circle is labeled '04'. The digits are arranged in a spiral pattern, starting from the center and moving outwards. The outer circle contains 10,000 digits, and the inner circle contains 4 digits.

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A stylized graphic of a vinyl record. The text "volume 1000" is written in a bold, black, sans-serif font at the top. The number "640" is written in a similar font in the center of the record. The record itself is represented by two concentric circles of small, black, pill-shaped indentations, with a black line between them. The entire graphic is set against a white background.

Foreword

In 1940, the mathematician Edward Kasner published the book "Mathematics and the Imagination", in which he popularized the words googol and googolplex which his nephew suggested as names for big numbers.

The number googol has been defined as 1 followed by a hundred zeros:

The much larger number googolplex has been defined as 1 followed by a googol zeros. While this number can easily be written as

$$\text{googolplex} = 10^{\text{googol}} = 10^{(10^{100})}$$

using the exponential notation, it has often been claimed that the number googolplex is so large that it can never be written out in full.

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