DNA data storage update

Karin Strauss, Microsoft Research
Why DNA?

Density

Relevance

Durability

Computation

Copies
DNA data storage basics

Bases:  A  C  G  T

Data:  10000111001001

Simple mapping:

<table>
<thead>
<tr>
<th>Bits</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>A</td>
</tr>
<tr>
<td>01</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>G</td>
</tr>
<tr>
<td>11</td>
<td>T</td>
</tr>
</tbody>
</table>

Store data in synthetic DNA strands
DNA storage end-to-end system
Previously featured...

Codec: 1GB

End-to-end system

Nanopore readout

Library automation

Molecular similarity-based search

Query

Results
New since last meeting

Physical recovery limits

Preservation study

Sustainability study

Bias sources

Scaling synthesis

DNA Data Storage Alliance

Website launched

First whitepaper published

50+ members and growing
Questions?