

# Phred, Phrap, Consed-Autofinish

Phred, Phrap, and Consed-Autofinish are standard bioinformatics tools used by over 250 commercial sites and thousands of academic labs. These three software tools can be licensed together or separately, but the combination is recommended because of the benefits of the integration of these programs. Information on licensing for one or all of these programs can be found below

## **Phred**

Phred reads DNA sequencer trace data, calls bases, assigns quality values to the bases, and writes the base calls and quality values to output files. Phred is available in a source code format as a site license.

For Descriptive and Technical Information for Phred, contact Brent Ewing, Software Engineer, email: [bge@uw.edu](mailto:bge@uw.edu)

## **Phrap**

Phrap is a package of programs for assembling shotgun DNA sequence data. Its key features include:

1. allows use of entire read (not just trimmed high quality part)
2. uses a combination of user-supplied and internally computed data quality information to improve accuracy of assembly in the presence of repeats
3. constructs contig sequence as a mosaic of the highest quality parts of reads (rather than a consensus)
4. provides extensive information about assembly (including quality values for contig sequence) to assist troubleshooting
5. handles very large datasets.

Phrap is available in a source code format as a site license and includes Phrap, Cross\_Match, and Swat.

For Descriptive and Technical Information, contact Phil Green, Professor, email: [phg@uw.edu](mailto:phg@uw.edu)

## **Consed-Autofinish**

Consed-Autofinish is a Unix-based graphical editor for Phrap sequence assemblies. Consed includes Autofinish, which automatically chooses finishing reads. Consed is tightly integrated with Phrap and is the optimal editor for use with Phrap.

Consed is available as a site license in an **executable** format (Sun Solaris, HP-UX, DEC-Alpha, Linux) and includes Consed and Autofinish.

For more information: <http://www.phrap.org/>

## International Requests:

University of Washington agreements require additional review if the requesting entity is located in, or affiliated with the government of, China (Including Hong Kong; not including Taiwan), Iran, North Korea, Russia, or Syria. For requests from these countries, please **allow for an additional month of processing time** for a response.

### Available Licenses:

**Academic License:** To obtain an academic license, [read and follow the instructions available on the phrap.org website](#).

**Distributor:** You may also obtain Phred, Phrap, and Consed-Autofinish licenses from our authorized distributor, [CodonCode](#).

### See right panel for the following available Commercial Licenses:

Phred Commercial License

Phrap/Cross\_Match/Swat Commercial License

Consed-Autofinish Commercial License

## References

Gerstein MB et al(8/28/2014), <https://www.nature.com/articles/nature13424>, Nature International Journal of Science

Rubin AF and Green P(11/20/2013), <https://bmcbgenomics.biomedcentral.com/articles/10.1186/1471-2164-14-812>, BMC Genomics 14:812 (2013).

<https://els2.comotion.uw.edu/product/phred-phrap-consed-autofinish>