(Note if this file appears to wide for your screen, go to File|Print Setup and choose portrait.)

This file describes items that will be included in a future release of SimWindows. The modifications listed below have been grouped according physics, user interface, and user transparent modifications. If a date and time is listed below the item, then this modification is completed for all versions last updated at this time or later. To check the last update time for your version, choose "Last Updated..." from the Help menu.

Physics:

1. Multiple quantum well levels - only one level is used.

2. Fermi - Dirac statistics
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

3. Finite surface recombination velocity boundary condition

4. Heat flow Equation
    Jul 14 1994 at 12:21:08

5. Transient analysis

6. Tunneling current
    SimWindows16 v. 1.4.0: updated on Mar 10 1996 at 19:14:32
    SimWindows32 v. 1.4.0: updated on Mar 10 1996 at 19:12:07

7. Fix absorption in qw regions for external generation purposes - bulk absorption is used instead.

8. Fix thermionic barrier height for quantum wells.
    May 05 1994 at 13:26:52

9. Optical mode calculation (DBR lasers).
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

10. Bandgap narrowing with temperature
    SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
    SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53

11. Computation of qw energy levels using Schodinger's Equation

12. Insulating and finite thermal conductivity boundary conditions
    Jul 18 1994 at 22:34:47

13. Temperature dependence of thermal conductivity
    SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
    SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53

14. Lateral Heat flow
    SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
    SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53

15. General Functions and Built-in models for material parameters
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42

SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

16. General functions for doping and alloy percentage
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

16. Add delta doping.
    Oct 12 1994 at 22:34:30

17. Removed delta-doping (use general functions instead)
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

18. Partial Ionization
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

19. Doping and Temperature Dependent Mobility
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

20. Temperature Dependent Electron Affinity
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

21. Edge Emitting Laser.

22. Third contact for transistor applications.

23. Hot electrons
    SimWindows16 v. 1.4.0: updated on Mar 10 1996 at 19:14:32
    SimWindows32 v. 1.4.0: updated on Mar 10 1996 at 19:12:07

User Interface:

1. Enhance device files
    Effects specifications
    Override default values
        SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
        SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45
    Repetitive structure (DBR and MQW) - Oct 25 1994 at 23:41:21

2. Trap convergence errors and Undo option on menu.
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

3. Automatic grid generation

4. Macros - perform a series of calculations.
    voltage:SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
        SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53
    temperature
    time
    frequency

5. Check consistency of input file.

Oct 25 1994 at 23:41:21

6. Generate Multiple Document Interface (MDI) using Borland OWL 2.5.
SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53

7. Trace Mode - Allow user to obtain values directly from graphs.
SimWindows16: Jan 10 1995 at 17:22:42
SimWindows32: Jan 10 1995 at 17:19:46

8. Improve output data files.
User defineable: SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53
Predefined selections: May 21 1994 at 13:32:55
All parameters menu option: May 21 1994 at 13:32:55

9. User defineable plots - Have the user specify exactly what data is to be plotted.
User defineable: SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53
Predefined selections: May 21 1994 at 13:32:55

10. Convergence message - Add a convergence to the sim information dialog box.
Oct 12 1994 at 22:34:30

11. Selectable between finite and infinite quantum wells - Only finite square quantum wells are handled.

12. Map input data onto device nodes - Any input data must correspond to the current device nodes.

13. Fix "convergence" and "must simulate" messages.
Oct 12 1994 at 22:34:30

14. Add zoom feature on menu.

15. Plot qw levels on band diagram.

16. Ask to save device when closing a file rather than just exiting the program.
SimWindows16: Jan 10 1995 at 17:22:42
SimWindows32: Jan 10 1995 at 17:19:46

17. User control of lasing wavelength
May 05 1994 at 11:14:53

18. Make waveguide loss user defineable.
May 21 1994 at 13:32:55

19. Generate 32 bit application.
SimWindows16: Jan 10 1995 at 17:22:42
SimWindows32: Jan 10 1995 at 17:19:46

20. Create better error handling scheme.
Oct 12 1994 at 22:34:30

21. Create general material parameters file compatible with device file input.

Oct 12 1994 at 22:34:30

22. Check version of state file.
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

23. View gridpoints on plots.
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

User Transparent:

1. Improve update of subnodes algorithm
    Jul 14 1994 at 12:21:08

2. Do not recompute mode absorption and stimulated emission factors.
    May 05 1994 at 11:14:53

3. Initialize cavity class/check other classes
    May 05 1994 at 11:14:53

4. Only access plot data when necessary.
    SimWindows16: Jan 10 1995 at 17:22:42
    SimWindows32: Jan 10 1995 at 17:19:46

5. Update TDevice::write_data_file() to use new flags.
    May 16 1994 at 21:02:41

6. Check separation of electron, hole, and lattice temperatures.
    SimWindows 16 version 1.1.1: Apr 16 1995 at 21:56:46
    SimWindows 32 version 1.1.1: Apr 16 1995 at 21:53:58

7. Option for Clamping Potential Updates
    Jul 18 1994 at 22:34:47

8. Ported to Borland C++ Compiler v. 4.5
    SimWindows 16 version 1.1.0: Mar 22 1995 at 12:21:33
    SimWindows 32 version 1.1.0: Mar 22 1995 at 12:19:53

9. Ported to Borland C++ Compiler v. 4.51
    SimWindows16 v. 1.2.0: updated on Sep 17 1995 at 21:18:42
    SimWindows32 v. 1.2.0: updated on Sep 17 1995 at 21:16:45

10. Ported to Borland C++ Compiler v. 4.52
    SimWindows16 v. 1.3.0: updated on Nov 21 1995 at 21:21:08
    SimWindows32 v. 1.3.0: updated on Nov 21 1995 at 21:18:41

11. Remove Device File Conversion
    Oct 12 1994 at 22:34:30