

		<p>technologies including CMOS, Ferroelectric, SOI, FinFET etc and should incorporate drift-diffusion, hydrodynamic and energy balance transport equations.</p> <ul style="list-style-type: none"> • large selection of physical models should be available such as surface/bulk mobility, recombination, impact ionization and tunneling models etc. Typical applications include MOS, BiCMOS technologies etc. <p>Advanced process/device module/framework to support the following-</p> <ul style="list-style-type: none"> • should be possible to simulate devices/structures using advanced materials such as binary, ternary and quaternary semiconductors etc. Should either have integrated built-in models or standalone for graded and abrupt hetero junctions, binary structures such as MESFETS, HEMTs and HBTs etc. • should be possible to describe the properties of ferroelectric films either directly within the framework or with standalone module and should accurately predict the static I-V behavior of these devices as well as the dynamic response in transient and small signal modes. • should have an integrated framework or stand alone module having a set of models for simulation of the various effects of quantum confinement and quantum transport of carriers in semiconductor devices. • Quantum confinement models must include Self-consistent Schrodinger Poisson, Density gradient, Bohm quantum Potential, Correction, Drift-Diffusion Mode Spcae, Non Equilibrium Green Function (NEGF) models etc. • should have integrated environment or stand alone module to model absorption and photo-generation in semiconductor devices with arbitrary topology in three dimensions. Should have features to account for arbitrary topologies, internal and external reflections are refractions and polarization dependencies. 	<p>1 License each for 2D and 3D for 5 years</p>
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		<ul style="list-style-type: none"> • Organic device simulator must consist of Organic Display and Organic Solar. As implied by their names, these simulators must be targeted at specific application requiring specific physical features. In the case of Organic Display, the simulator must perform analysis of organic based active displays along with the simulation of principally organic FET Devices, OFETs, and Organic light emitting devices, OLEDs. The organic solar simulator must be specific to light sensitive devices, particularly solar cells, Organic based imaging sensors. • should either have integrated or standalone module to accurately describe and model the noise associated with device. <p>2D/3D circuit simulation framework or simulator-</p> <ul style="list-style-type: none"> • to simulate physically-based 3D devices with a circuit description that conforms to the SPICE netlist format. • applications should include power circuits, high performance digital and analog circuits, high-frequency circuits, thin film transistor circuits, and optoelectronic circuits etc. • should be possible to simulate circuits atleast having 200 nodes, 300 elements, and up to 10 physically-based 2D/3D devices. • should have model library to provide an accurate and comprehensive description of the circuit elements • wide range of SPICE should be available such as: voltage, current and optical sources, MOSFET(level1,2,3, BSIM4, EKV, PSP, HiSIM2, etc. • should be feasible to simulate Bipolar, HBT, TFT, Diode, JFET etc. 	<p>1 License for 5 years</p>
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		<p>Interactive Deck Development and Runtime Environment having following features:</p> <ul style="list-style-type: none"> • should have features like general debugger style tools, GUI based process file input, line by line runtime execution etc. • should be able to extract all manner of device characteristics at any stage during the runtime. <p>Structure and Mesh Editor</p> <ul style="list-style-type: none"> • to either create or remesh or edit existing device structures that can be easily integrated with 2D or 3D simulator and other support tools. • should be possible to create or specify regions of arbitrary materials and polygonal shapes and should support different doping profiles etc. <p>2D/3D GUI/ Interactive Visualization Tool -</p> <ul style="list-style-type: none"> • should provide a user-friendly fully customizable environment to view 3D structures in various TCAD specific display modes such as regions, contours, etc. • should plot surface contours for any simulated variable such as: net doping, potential, electric field, carrier concentration and should enable 2D cuts along any axis in 3D. <p>Integrated Layout Editor</p> <ul style="list-style-type: none"> • layout editor that can read, write, create and edit layout files. • should support designs and modify mask layouts. • Should have features such as features, such as automated grid generation for process simulation, and should be integrable with device flow. 	<p>5 Licenses for 5 years</p> <p>5 Licenses each for 2D/3D for 5 years</p> <p>5 Licenses each for 2D/3D for 5 years</p> <p>5 Licenses for 5 years</p>
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All the upgrades, updates and technical support should be available during the period of validity of license i.e. 5 years

Important Information:

1. The sealed quotation should be addressed to Head, Department of Electronic Science, University of Delhi South Campus, Benito Juarez Road, New Delhi - 110021, with all terms and conditions **latest by 13-09-2016, 12:00 PM.**

2. The "**Technical and Financial Bids**" should be submitted in separate sealed envelopes. Both the envelopes must be enclosed in a single big sealed envelope. Each one of the envelope should be superscribed with our reference number and due date given above along with the product name.

3. Quotations have to be submitted in a **two-bid system**. The first part, **Technical bid**, should be complete in all respects and contain all information asked for, **except prices**. The Technical bid should include all details on specifications asked for. The Technical bid should also have the following documents:

- Proprietary certificate, if the item is a proprietary item.
- Manufacturer's Authorization Certificate.
- The Company profile
- Details of atleast 10 users in India for the item quoted in the bid.
- Details of support/ service centers.
- Validity compliance statement.
- Deviation table.
- Technical documentation (Printed product brochures and all technical leaflets, etc) to be compulsorily attached with the technical offer.

The second part, **Financial Bid**, should contain pricing of item mentioned in the technical bid.

4. The quote should be valid for 90 days from due date. Payment will be by DD or wire transfer upon installation..

5. **Date, Time and Venue of
Technical Bid opening:**

**13-09-2016, 03:00 PM
Department of Electronic Science, UDSC**

Drakshi Khular

Head

Department of Electronic Science
University of Delhi South Campus

Professor Enakshi Khular Sharma
Head
Department of Electronic Science