The Crowdsourcing Compiler

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modern programming

• specify broad control and data structures
• don’t worry about:
  – memory management/allocation/reuse
  – primary/secondary/tertiary
  – loop optimization
  – parallelization, cluster management
• don’t need to know much about how computers “really” work
imagine a high-level programming language...

- much like those of today
- but with built-in functionality for social computation
- e.g. classifying objects, making predictions/decisions, optimization/search
- perhaps even in the physical world (e.g. taskrabbit, uber)
...whose compiler would decide:

- human or machine?
- sequential or parallel?
- incentives: payment (subject to budget), entertainment, prestige, purpose,…
- individuals or groups?
- structure, organization, communication
- coverage/overlap
- toy problem: collective short-term memorization
- sample instantiation: Emery Berger’s AutoMan at UMass; others?
SN54HC132, SN74HC132
QUADRUPLE POSITIVE-NAND GATES
WITH SCHMITT-TRIGGER INPUTS

- Wide Operating Voltage Range of 2 V to 6 V
- Outputs Can Drive Up To 10 LS-TTL Loads
- Low Power Consumption, 20-μA Max Icc
- Typical Tpd = 14 ns
- ±4-mA Output Drive at 5 V
- Low Input Current of 1 μA Max
- Operation From Very Slow Input Transitions
- Temperature-Compensated Threshold Levels
- High Noise Immunity
- Same Pinouts as ‘HC00

description/ordering information

Each circuit functions as a NAND gate, but because of the Schmitt action, it has different input threshold levels for positive- and negative-going signals. The ‘HC132 devices perform the Boolean function Y = A • B or Y = A + B in positive logic.

These circuits are temperature compensated and can be triggered from the slowest of input ramps and still give clean jitter-free output signals.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>TA</th>
<th>PACKAGE</th>
<th>ORDERABLE PART NUMBER</th>
<th>TOP-SIDE MARKING</th>
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<tbody>
<tr>
<td>-40°C to 85°C</td>
<td>DIP – N</td>
<td>SN74HC132N</td>
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<td>SOIC – D</td>
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 NC – No internal connection

hard questions

- what should the “components” look like?
- what should their “operating characteristics” or specs look like?
- will heterogeneity of “hardware” kill this whole idea?
- is the whole idea just too creepy to contemplate?