

Element 1[pre]: A touch sensor device comprising:	Element 12[pre]: A method comprising:	Element 13[pre]: A single integrated circuit comprising:	Element 14[pre]: A computer comprising:
		Element 13[a]: a memory element;	Element 14[a]: a memory element;
Element 1[a]: a sensor having a sensitive area extending in at least one-dimension and arranged to output sense signals responsive to proximity of an object to the sensitive area			
Element 1[b]: a processor operable to execute position-processing logic stored in one or more tangible media, the position-processing logic, when executed by the processor, configured to: calculate positions of interactions with the sensitive area from an analysis of the sense signals; and output a times series of data indicative of the interaction positions on the sensor, the interaction	Element 12[a]: receiving a times series of data indicative of the interaction positions on a sensor, the interaction positions corresponding to touches;	Element 13[b]: a processor operable to execute logic stored in one or more tangible media, the logic, when executed by the processor, operable to: receive a times series of data indicative of the interaction positions on a sensor, the interaction positions corresponding to touches;	Element 14[b]: a processor operable to execute logic stored in one or more tangible media, the logic, when executed by the processor, operable to: receive a times series of data indicative of the interaction positions on a sensor, the interaction positions corresponding to touches;

<p>positions corresponding to touches; and</p>			
<p>Element 1[c]: a processor operable to execute gesture-processing logic stored in one or more tangible media, the gesture-processing logic, when executed by the processor, configured to analyze the time series of data to distinguish one or more gesture inputs from the time series of data, the gesture-processing logic being coded with gesture-recognition code comprising a plurality of state-machine modules,</p>	<p>Element 12[b]: analyzing the time series of data to distinguish one or more gesture inputs from the time series of data using gesture-recognition code comprising a plurality of state-machine modules,</p>	<p>Element 13[c]: analyze the time series of data to distinguish one or more gesture inputs from the time series of data, the gesture-processing logic being coded with gesture-recognition code comprising a plurality of state-machine modules,</p>	<p>Element 14[c]: analyze the time series of data to distinguish one or more gesture inputs from the time series of data using gesture-recognition code comprising a plurality of state-machine modules,</p>
<p>Element 1[d]: the plurality of state-machine modules comprising: a first one-touch state-machine module, the first one-touch state-machine module being operable to recognize at least a first one-touch gesture and generate a first</p>	<p>Element 12[c]: the plurality of state-machine modules comprising: a first one-touch state-machine module, the first one-touch state-machine module being operable to recognize at least a first one-touch gesture and generate a first output</p>	<p>Element 13[d]: the plurality of state-machine modules comprising: a first one-touch state-machine module, the first one-touch state-machine module being operable to recognize at least a first one-touch gesture and generate a first output</p>	<p>Element 14[d]: the plurality of state-machine modules comprising: a first one-touch state-machine module, the first one-touch state-machine module being operable to recognize at least a first one-touch gesture and generate a first output based on the first one-touch gesture;</p>

output based on the first one-touch gesture;	based on the first one-touch gesture;	based on the first one-touch gesture;	
Element 1[e]: a second one-touch state-machine module, the second one-touch state-machine module being operable to recognize at least a second one-touch gesture and generate a second output based on the second one-touch gesture; and	Element 12[d]: a second one-touch state-machine module, the second one-touch state-machine module being operable to recognize at least a second one-touch gesture and generate a second output based on the second one-touch gesture; and	Element 13[e]: a second one-touch state-machine module, the second one-touch state-machine module being operable to recognize at least a second one-touch gesture and generate a second output based on the second one-touch gesture; and	Element 14[e]: a second one-touch state-machine module, the second one-touch state-machine module being operable to recognize at least a second one-touch gesture and generate a second output based on the second one-touch gesture; and
Element 1[f] a multi-touch state-machine module operable to: receive, directly from the first one-touch state-machine module, the first output; receive, directly from the second one-touch state-machine module, the second output; and recognize, based on at least the first and second outputs, at least one multi-touch gesture,	Element 12[e]: a multi-touch state-machine module operable to: receive, directly from the first one-touch state-machine module, the first output; receive, directly from the second one-touch state-machine module, the second output; and recognize, based on at least the first and second outputs, at least one multi-touch gesture,	Element 13[f]: a multi-touch state-machine module operable to: receive, directly from the first one-touch state-machine module, the first output; receive, directly from the second one-touch state-machine module, the second output; and recognize, based on at least the first and second outputs, at least one multi-touch gesture,	Element 14[f]: a multi-touch state-machine module operable to: receive, directly from the first one-touch state-machine module, the first output; receive, directly from the second one-touch state-machine module, the second output; and recognize, based on at least the first and second outputs, at least one multi-touch gesture,
Element 1[g]: the first one-touch state-machine	Element 12[f]: the first one-touch state-machine	Element 13[g]: the first one-touch state-machine	Element 14[g]: the first one-touch state-machine module,

<p>module, the second one-touch state-machine module, and the multi-touch state-machine module being distinct state-machine modules; and</p>	<p>module, the second one-touch state-machine module, and the multi-touch state-machine module being distinct state-machine modules; and</p>	<p>module, the second one-touch state-machine module, and the multi-touch state-machine module being distinct state-machine modules; and</p>	<p>the second one-touch state-machine module, and the multi-touch state-machine module being distinct state-machine modules; and</p>
<p>Element 1[h]: output the recognized multi-touch gesture.</p>	<p>Element 12[g]: outputting the recognized multi-touch gesture.</p>	<p>Element 13[h]: output the recognized multi-touch gesture.</p>	<p>Element 14[h]: output the recognized multi-touch gesture.</p>
<p>Claim 2: The device of claim 1, each of the plurality of state-machine modules including an idle-state module and a plurality of gesture-interpretation-state modules, the idle-state module being entered at the start of operation and being able to be returned to from at least some of the gesture-interpretation-state modules.</p>			
<p>Claim 3: The device of claim 2, each of the plurality of gesture-interpretation-state modules for each of the one-touch</p>			

state-machine modules including a touch-state module and the idle-state module passing, responsive to a touch, control to the touch-state module.			
Claim 4: The device of claim 3, the plurality of gesture-interpretation-state modules for each of the first and second one-touch state-machine modules including a press-state module to which control can pass from a touch-state module if a touch of a duration longer than a threshold duration is sensed in the touch-state module.			
Claim 5: The device of claim 4, the press-state being a super-state comprising multiple sub-states to distinguish between different durations of press.			
Claim 6: The device of claim 2, the plurality of			

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