

Exhibit 172-A13
Invalidity Chart for U.S. Patent No. 11,937,172 In View of Smith

U.S. Patent Application Publication No. 2007/0124211 (“Smith”) was filed on May 25, 2006, published on May 31, 2007, and therefore qualifies as prior art under at least 35 U.S.C. §§ 102(a), (b), and (e) as to the asserted claims of U.S. Pat. No. 11,937,172 (“the ’172 Patent”). Smith, including any material incorporated by reference into Smith, anticipates claims 1-16 (“the Asserted Claims”) of the ’172 Patent under 35 U.S.C. § 102. Smith also renders obvious the Asserted Claims under 35 U.S.C. § 103, alone based on the state of the art and/or in combination with one or more references identified in Samsung’s accompanying disclosure for the ’172 Patent.¹

To the extent Plaintiff alleges that the Smith does not disclose any particular limitation of the Asserted Claims of the ’172 Patent, either expressly or inherently, it would have been obvious to a person of ordinary skill in the art as of the priority date of the ’172 Patent to modify the Smith reference and/or to combine the teachings of the Smith reference with other prior art references, including but not limited to the present prior art references found in Exhibit 172-B and the corresponding section(s) of charts for other prior art references for the ’172 Patent in a manner that would have rendered the Asserted Claims invalid as obvious.

With respect to the obviousness of the Asserted Claims under 35 U.S.C. § 103, one or more of the principles enumerated by the United States Supreme Court in *KSR v. Teleflex*, 550 U.S. 398 (2007) apply, including: (a) combining various claimed elements known in the prior art according to known methods to yield a predictable result; and/or (b) making a simple substitution of one or more known elements for another to obtain a predictable result; and/or (c) using a known technique to improve a similar device or method in the same way; and/or (d) applying a known technique to a known device or method ready for improvement to yield a predictable result; and/or (e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was “obvious to try”; and/or (f) a known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on given design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and/or (g) a teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention. It therefore would have been obvious to one of ordinary skill in the art to combine the disclosures of these references in accordance with the principles and rationales set forth above.

¹ Samsung notes that Plaintiff appears in many instances to be pursuing overly broad constructions of various limitations of the asserted claims of the ’172 Patent in an effort to piece together an infringement claim where none exists and to accuse a product that does not practice the claims. This claim chart may take into account Plaintiff’s overly broad constructions of the claim limitations. Any assertion that a particular limitation is disclosed by a prior art reference may be based on Plaintiff’s apparent constructions and is not intended to be, and is not, an admission that such constructions are supportable or proper.

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The citations to portions of any reference in this chart are exemplary only. For example, a citation that refers to or discusses a figure or figure item should be understood to also incorporate by reference that figure and any additional descriptions of that figure as if set forth fully therein. Samsung reserves the right to rely on the entirety of the references cited in this chart to show that the Asserted Claims are invalid. Citations presented for one claim limitation are expressly incorporated by reference into all other limitations for that claim as well as all limitations of all claims on which that claim depends. Samsung also reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff's infringement contentions, and/or information obtained during discovery as the case progresses.

Claim	U.S. Patent No. 11,937,172	Exemplary Disclosure in Smith
[1.1]	A method of operating a smartphone in performing at least one financial transaction; the method including a two-step process in establishing and using a capability in order to perform said at least one financial transaction; the method comprising:	<p>To the extent the preamble is limiting, Smith discloses “a method of operating a smartphone in performing at least one financial transaction; the method including a two-step process in establishing and using a capability in order to perform said at least one financial transaction; the method comprising.” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p>

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	<p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications</p>
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		<p>device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[1.2]	responsive to sensing at least one parameter by at least one sensor of the smartphone and responsive to determining that the at least one parameter that is sensed satisfies a criterion, performing a first step of said two-step process by enabling a	<p>Smith discloses “responsive to sensing at least one parameter by at least one sensor of the smartphone and responsive to determining that the at least one parameter that is sensed satisfies a criterion, performing a first step of said two-step process by enabling a mode to communicate by the smartphone information requesting an authorization to establish said capability;” See, e.g.:</p>

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	<p>mode to communicate by the smartphone information requesting an authorization to establish said capability;</p>	<p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p>
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	<p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications</p>
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		<p>device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items</p>
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	<p>presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62</p>
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	<p>and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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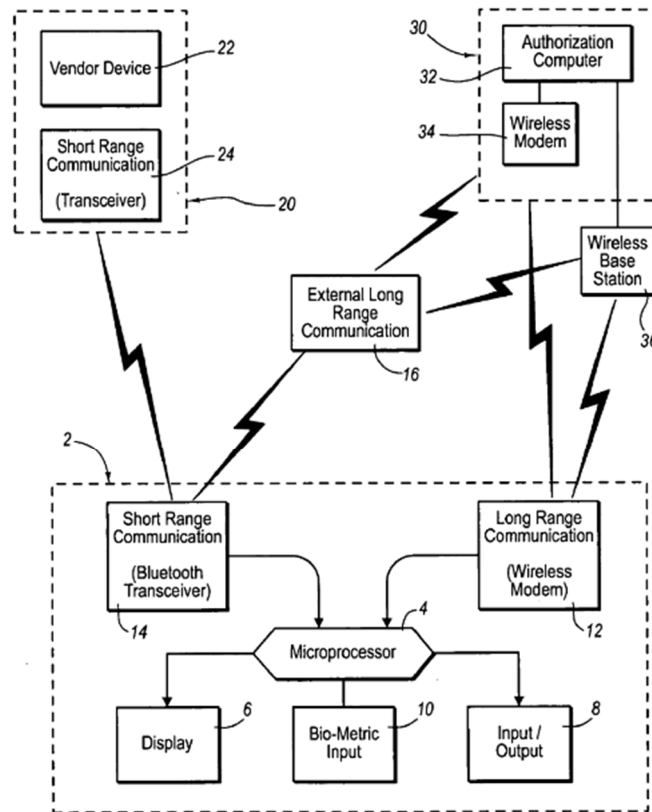


Figure 1

[Fig.1]

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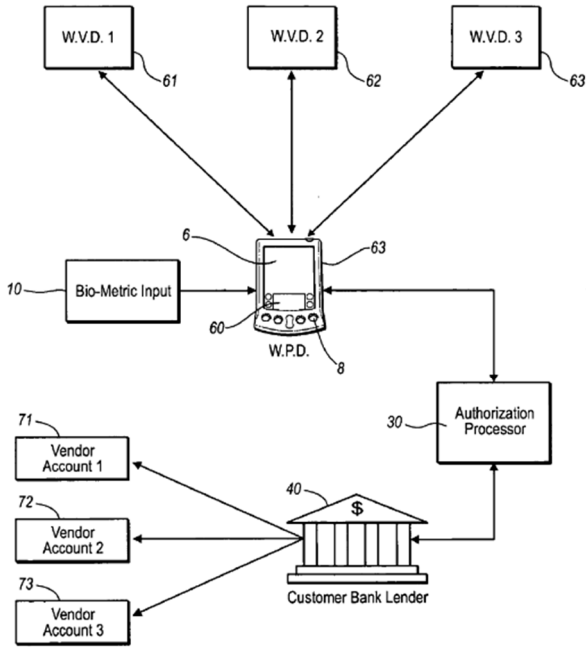
		 <p align="center">Figure 3</p> <p>[Fig.3]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[1.3]	while the mode is enabled, and as a precursor to performing a second	Smith discloses “while the mode is enabled, and as a precursor to performing a second step of said two-step process, transmitting by the smartphone first data to a

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	<p>step of said two-step process, transmitting by the smartphone first data to a first device requesting the authorization to establish said capability to perform said at least one financial transaction; and</p>	<p>first device requesting the authorization to establish said capability to perform said at least one financial transaction; and” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor</p>
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	<p>devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p>
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	<p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2.</p>
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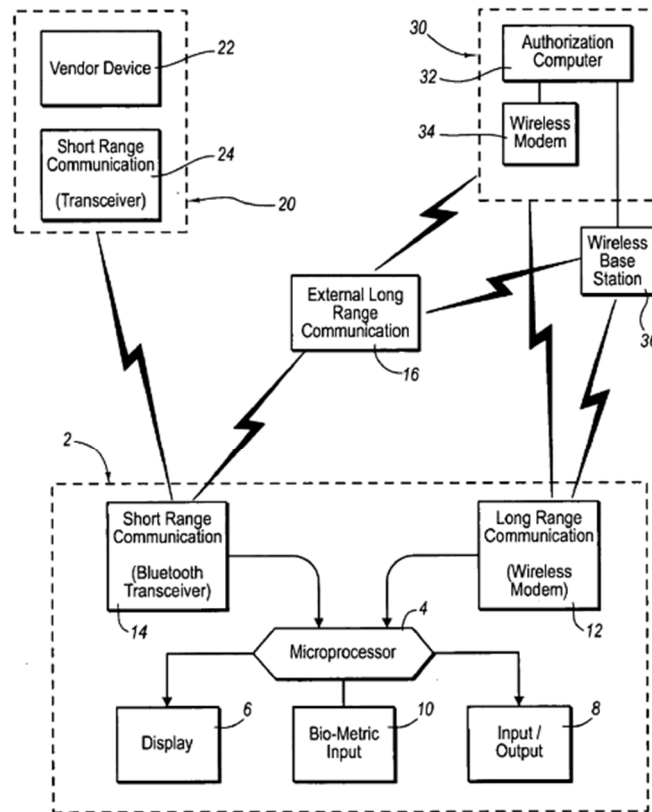
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	<p>Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single</p>
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	<p>WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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[Fig.1]

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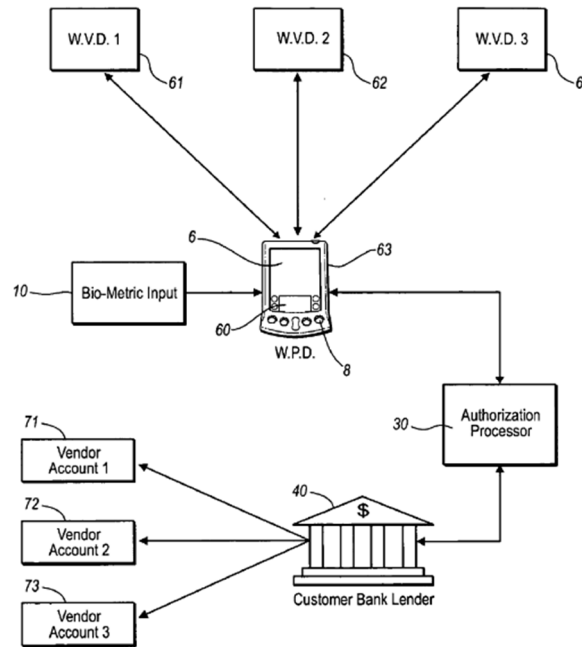


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[1.4]	receiving by the smartphone second data from the first device, comprising the authorization, responsive to said transmitting by the smartphone the first data; then	<p>Smith discloses “receiving by the smartphone second data from the first device, comprising the authorization, responsive to said transmitting by the smartphone the first data; then” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor</p>
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	<p>devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p>
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	<p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on</p>
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	<p>the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of</p>
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		<p>funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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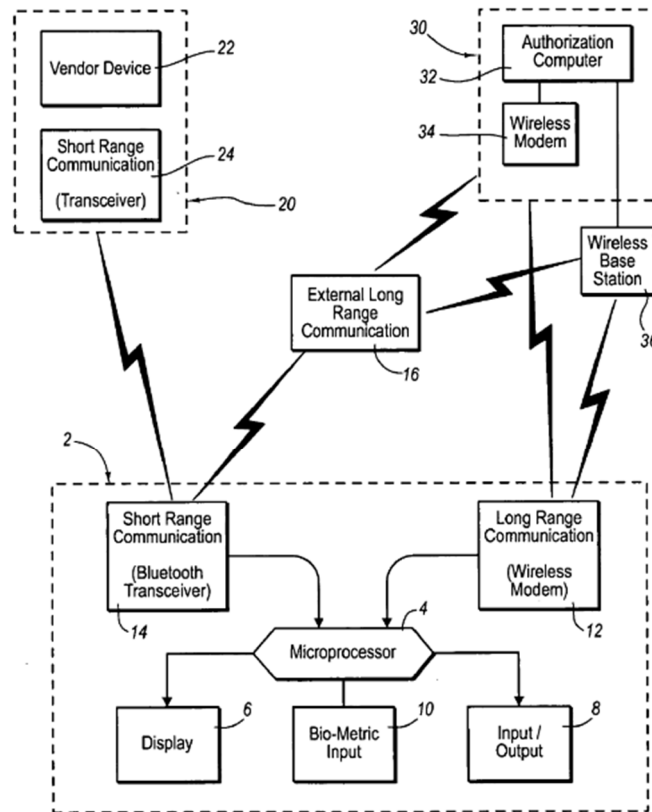


Figure 1

[Fig.1]

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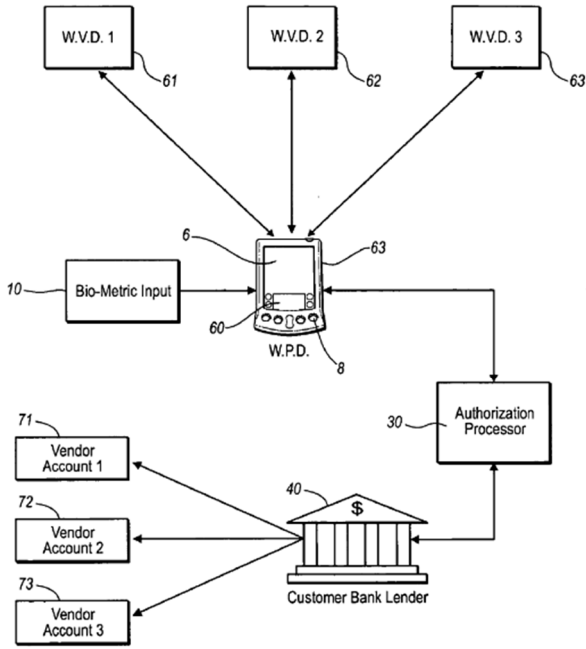
		 <p align="center">Figure 3</p> <p>[Fig.3]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[1.5]	performing the second step of said two-step process comprising	Smith discloses “performing the second step of said two-step process comprising performing a first transaction of said at least one financial transaction, responsive to

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	<p>performing a first transaction of said at least one financial transaction, responsive to detecting by the smartphone that a proximity condition is satisfied and responsive to sensing the at least one parameter and determining that the at least one parameter sensed satisfies the criterion;</p>	<p>detecting by the smartphone that a proximity condition is satisfied and responsive to sensing the at least one parameter and determining that the at least one parameter sensed satisfies the criterion;” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor</p>
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	<p>devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p>
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	<p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p>
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	<p>Smith at [0029]</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device 12 for communication with an authorization provider 30. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at [0030]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow</p>
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	<p>multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without</p>
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	<p>vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user</p>
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		<p>identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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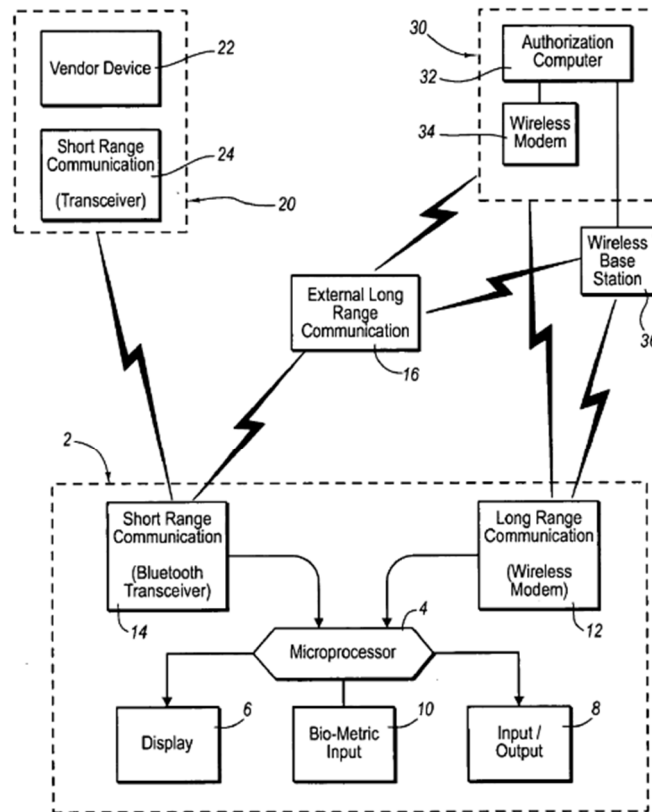


Figure 1

[Fig.1]

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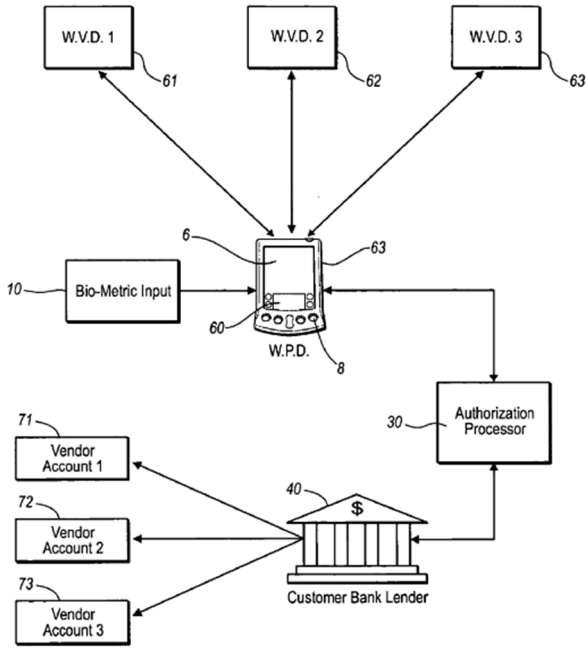
		 <p align="center">Figure 3</p> <p>[Fig.3]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[1.6]	wherein said performing the second step of said two-step process	Smith discloses “wherein said performing the second step of said two-step process comprises sensing that the proximity condition is satisfied relative to an access

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	<p>comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that a value of the at least one parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the at least one parameter sensed satisfies the criterion, paying for a product by selectively sending information to at least one device;</p>	<p>point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that a value of the at least one parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the at least one parameter sensed satisfies the criterion, paying for a product by selectively sending information to at least one device;” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account</p>
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	<p>holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range</p>
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	<p>network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range</p>
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	<p>communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device 12 for communication with an authorization provider 30. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at [0030]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a</p>
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	<p>Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor</p>
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	<p>identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and</p>
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	<p>make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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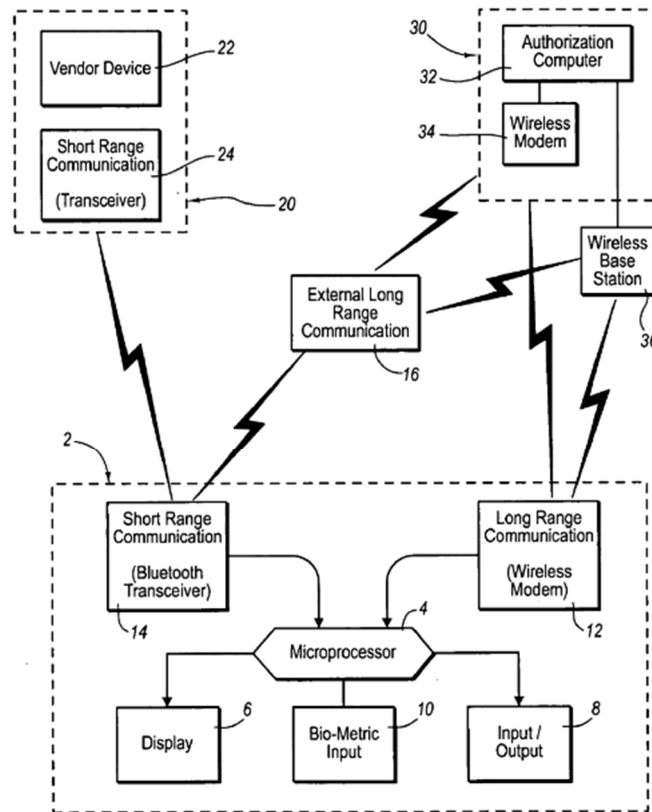


Figure 1

[Fig.1]

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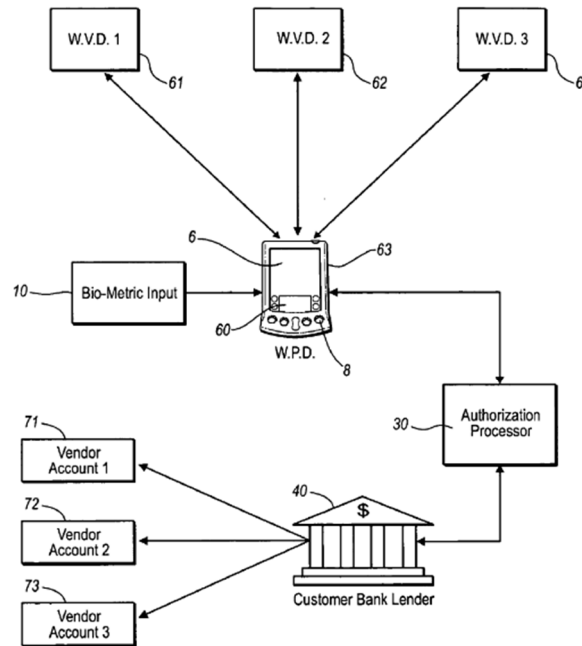


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[1.7]	<p>wherein said paying for a product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and</p>	<p>Smith discloses “wherein said paying for a product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor</p>
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	<p>devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p>
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	<p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p>
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	<p>Smith at [0029]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available</p>
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		<p>products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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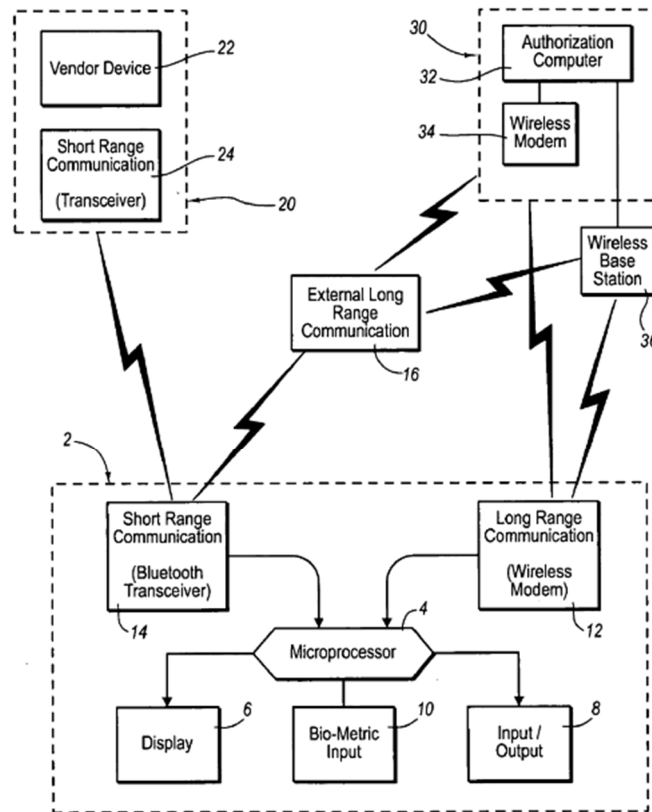


Figure 1

[Fig.1]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as

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		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[1.8]	wherein said at least one parameter comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.	<p>Smith discloses “wherein said at least one parameter comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.” See, e.g.:</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking</p>

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		<p>technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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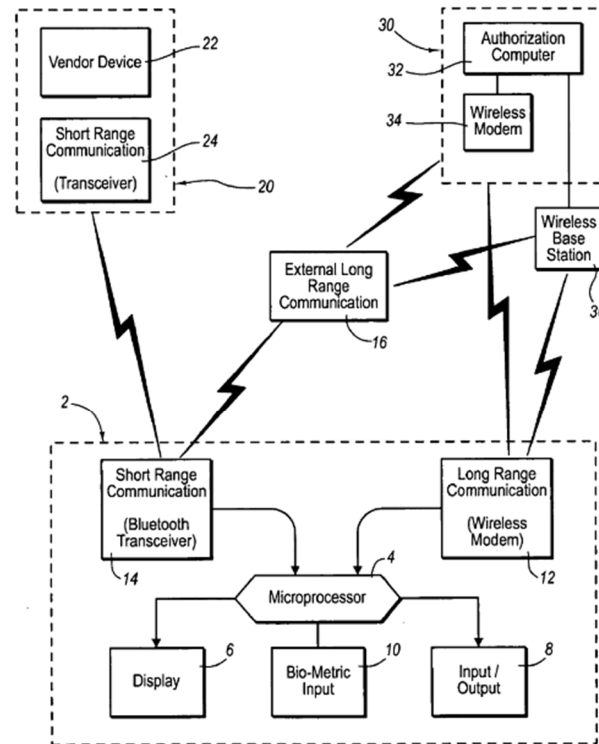


Figure 1

[Fig.1]

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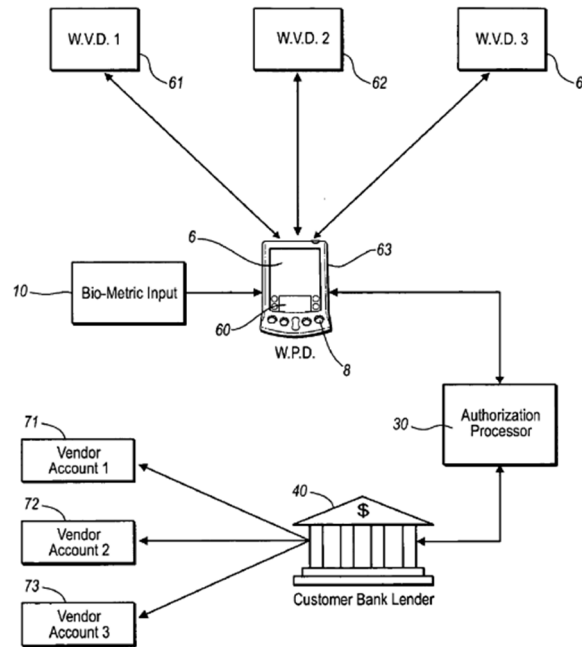


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

[2.1]	The method of claim 1,	To the extent the preamble is limiting, Smith discloses “the method of claim 1,” See, e.g.:
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		[1.1], supra.
[2.2]	wherein said enabling a mode to communicate by the smartphone information requesting an authorization comprises enabling a first function of the smartphone while disabling a second function of the smartphone responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and then selectively communicating with the first device by using a communications capability of the first function, selectively establishing a master-slave relationship with the first device, and selectively requesting from the first device the authorization to establish the capability to conduct said at least one financial transaction.	<p>Smith discloses “wherein said enabling a mode to communicate by the smartphone information requesting an authorization comprises enabling a first function of the smartphone while disabling a second function of the smartphone responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and then selectively communicating with the first device by using a communications capability of the first function, selectively establishing a master-slave relationship with the first device, and selectively requesting from the first device the authorization to establish the capability to conduct said at least one financial transaction.” See, e.g.:</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are</p>

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		<p>present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[3.1]	The method of claim 2, further comprising:	<p>To the extent the preamble is limiting, Smith discloses “the method of claim 2, further comprising:” See, e.g.:</p> <p>[1.1], supra.</p>

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[3.2]	repeatedly sensing the at least one parameter and repeatedly deciding, based on comparing a value of the at least one parameter sensed to the criterion, whether or not to maintain enabled said first function while maintaining disabled said second function; and	<p>Smith discloses “repeatedly sensing the at least one parameter and repeatedly deciding, based on comparing a value of the at least one parameter sensed to the criterion, whether or not to maintain enabled said first function while maintaining disabled said second function; and” See, e.g.:</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[3.3]	maintaining enabled said first function while maintaining disabled said second function responsive to deciding that said value of the at least one parameter continues to satisfy the criterion; or	<p>Smith discloses “maintaining enabled said first function while maintaining disabled said second function responsive to deciding that said value of the at least one parameter continues to satisfy the criterion; or” See, e.g.:</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[3.4]	disabling said first function and enabling said second function responsive to deciding that the value of the at least one parameter no longer satisfies the criterion.	<p>Smith discloses “disabling said first function and enabling said second function responsive to deciding that the value of the at least one parameter no longer satisfies the criterion.” See, e.g.:</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill</p>

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		in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[4.1]	The method of claim 1,	To the extent the preamble is limiting, Smith discloses “the method of claim 1,” See, e.g.: [1.1], supra.
[4.2]	wherein said transmitting by the smartphone first data to a first device is responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and is further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and	<p>Smith discloses “wherein said transmitting by the smartphone first data to a first device is responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and is further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and” See, e.g.:</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to</p>

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		<p>account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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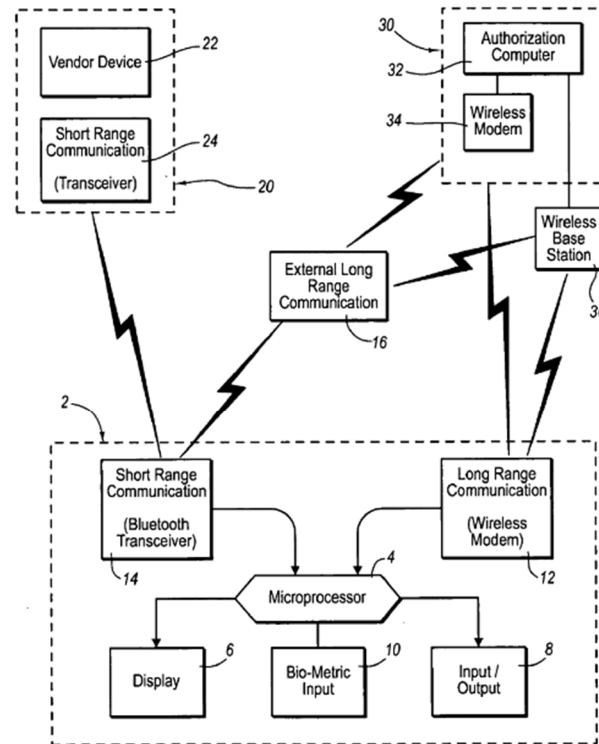


Figure 1

[Fig.1]

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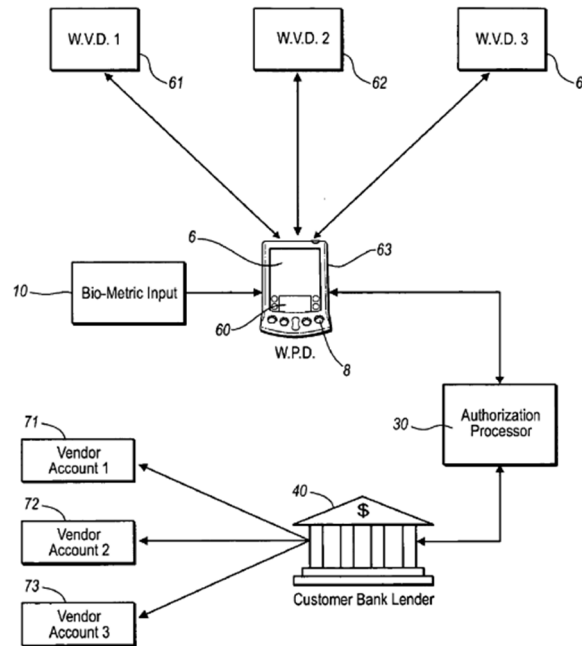


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

[4.3]	wherein said receiving by the smartphone second data from the	Smith discloses “wherein said receiving by the smartphone second data from the first device is responsive to said transmitting by the smartphone the first data and
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	<p>first device is responsive to said transmitting by the smartphone the first data and comprises receiving by the smartphone information relating to an acknowledgement and/or authorization to establish and use the capability to perform said at least one financial transaction.</p>	<p>comprises receiving by the smartphone information relating to an acknowledgement and/or authorization to establish and use the capability to perform said at least one financial transaction.” See, e.g.:</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is</p>
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		<p>initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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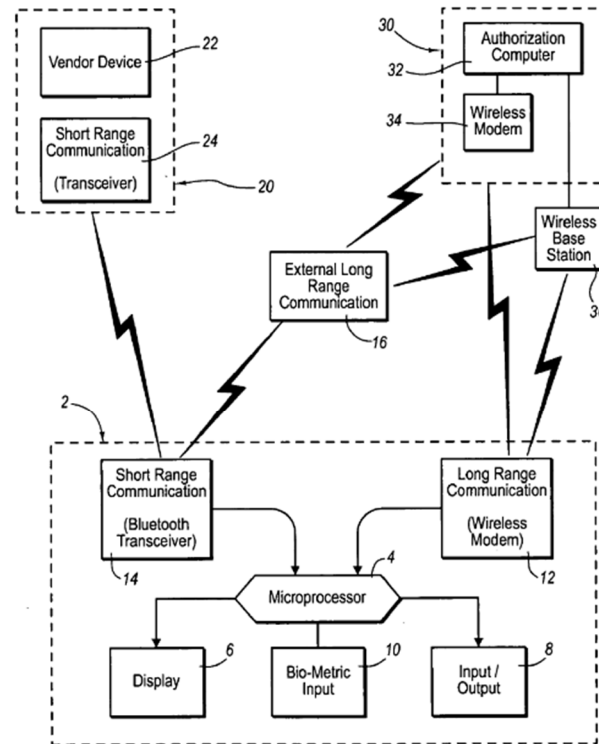


Figure 1

[Fig.1]

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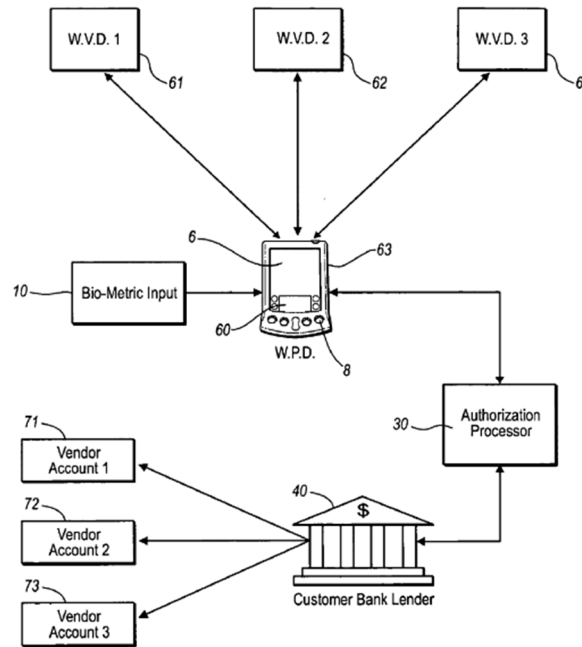


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

[5.1]	The method of claim 1, further comprising:	To the extent the preamble is limiting, Smith discloses “the method of claim 1, further comprising:” See, e.g.:
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		[1.1], supra.
[5.2]	responsive to performing a financial transaction, causing data to be transmitted selectively to at least one device and further causing data to be received selectively from at least one device.	<p>Smith discloses “responsive to performing a financial transaction, causing data to be transmitted selectively to at least one device and further causing data to be received selectively from at least one device.” See, e.g.:</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p>

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		<p>Smith at [0020]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[6.1]	The method of claim 1,	<p>Smith discloses “The method of claim 1,” See, e.g.:</p> <p>[1.1], supra.</p>
[6.2]	wherein said transmitting by the smartphone first data to a first device and receiving by the smartphone second data from the first device comprises wirelessly transmitting/receiving by the smartphone using unlicensed frequencies, licensed frequencies, a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol.	<p>Smith discloses “wherein said transmitting by the smartphone first data to a first device and receiving by the smartphone second data from the first device comprises wirelessly transmitting/receiving by the smartphone using unlicensed frequencies, licensed frequencies, a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol.” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to</p>

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	<p>complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing</p>
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	<p>devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p>
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	<p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same</p>
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	<p>time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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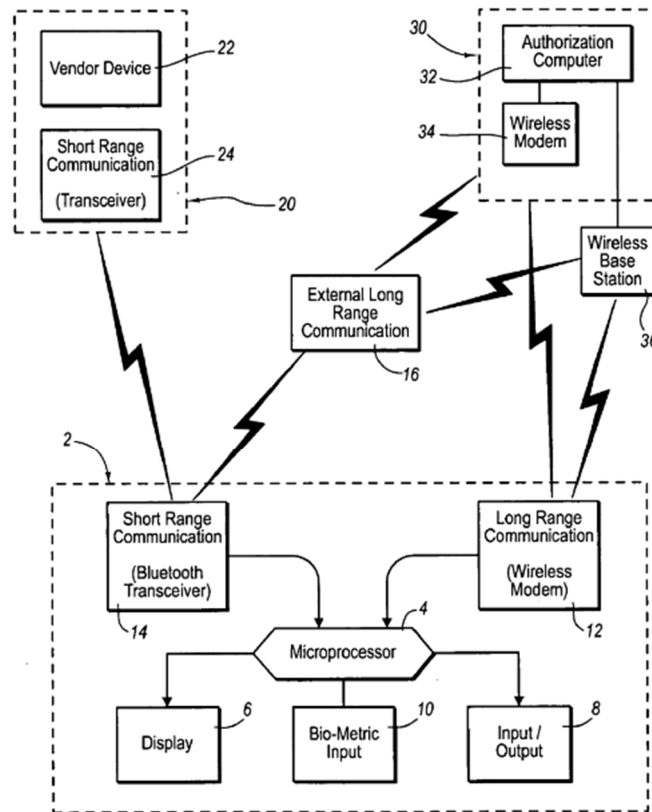


Figure 1

[Fig.1]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as

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		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[7.1]	The method of claim 1, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.	<p>Smith discloses “The method of claim 1, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.” See, e.g.: [1.1], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p>

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		<p>Smith at [0020]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[8.1]	The method of claim 7,	<p>To the extent the preamble is limiting, Smith discloses “the method of claim 7,” See, e.g.:</p> <p>[7.1], supra.</p>
[8.2]	wherein said using unlicensed frequencies comprises using unlicensed frequencies in a Time Division Duplex operation;	<p>Smith discloses “wherein said using unlicensed frequencies comprises using unlicensed frequencies in a Time Division Duplex operation;” See, e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between</p>

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	<p>points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p>
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	<p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p>
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	<p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer</p>
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		<p>may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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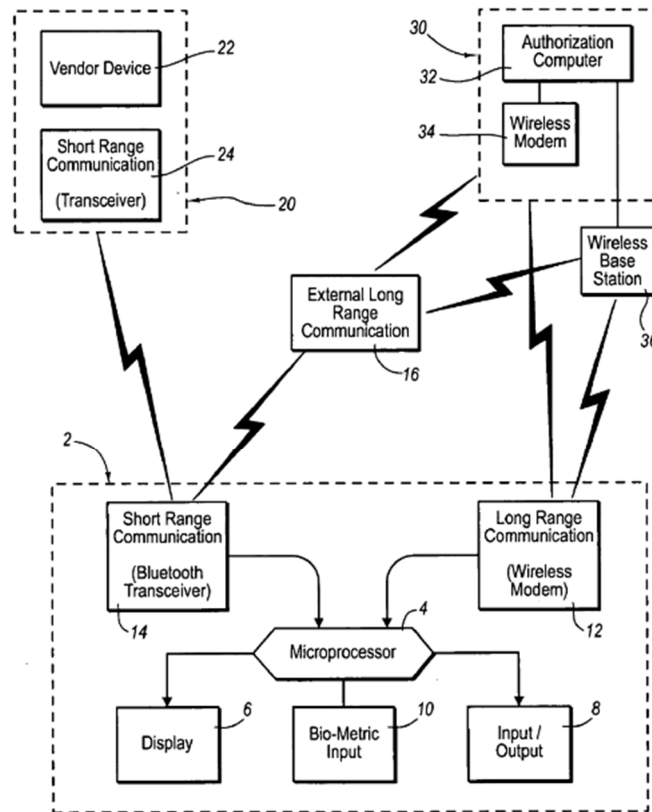


Figure 1

[Fig.1]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as

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		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[8.3]	wherein said selectively sending information to at least one device comprises selectively, sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and/or	<p>Smith discloses “wherein said selectively sending information to at least one device comprises selectively, sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and/or” See, e.g.:</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit</p>

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	<p>authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill</p>
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		in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[8.4]	wherein the method further comprises selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.	<p>Smith discloses “wherein the method further comprises selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.” See, e.g.:</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit</p>

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		<p>authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of</p>
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		ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[9.1]	A smartphone that is configured to perform operations, comprising a two-step process, associated with establishing and using a capability in order to perform at least one financial transaction; the operations comprising:	<p>To the extent the preamble is limiting, Smith discloses “a smartphone that is configured to perform operations, comprising a two-step process, associated with establishing and using a capability in order to perform at least one financial transaction; the operations comprising:” See, e.g.:</p> <p>[1.1], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a</p>

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		<p>purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to</p>
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		<p>identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[9.2]	responsive to sensing at least one parameter by at least one sensor of the smartphone and responsive to determining that the at least one parameter that is sensed satisfies a criterion, performing a first step of said two-step process by enabling a mode to communicate information requesting an authorization to establish said capability;	<p>Smith discloses “responsive to sensing at least one parameter by at least one sensor of the smartphone and responsive to determining that the at least one parameter that is sensed satisfies a criterion, performing a first step of said two-step process by enabling a mode to communicate information requesting an authorization to establish said capability;” See, e.g.:</p> <p>[1.2], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit</p>

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		<p>authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale</p>
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	<p>device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p>
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		<p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In</p>
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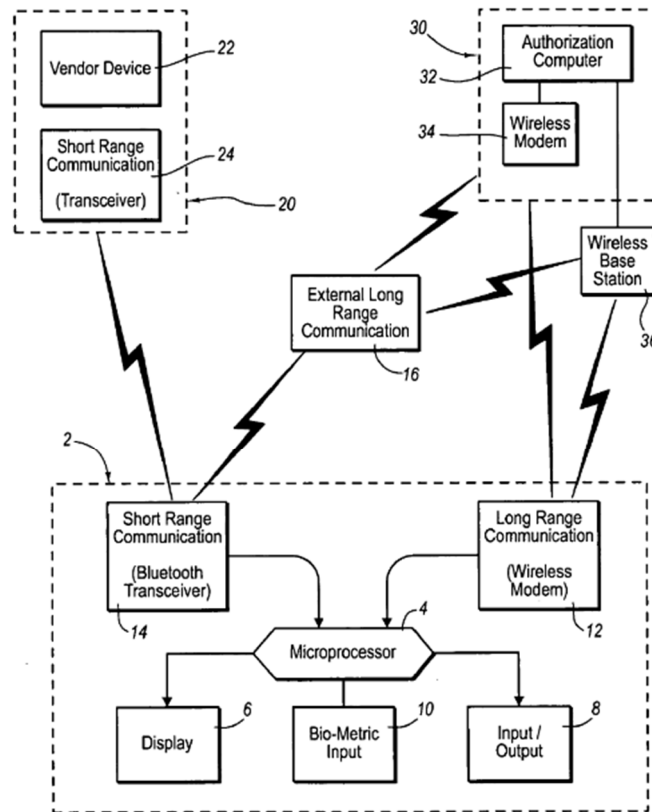
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	<p>most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting</p>
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		<p>authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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[Fig.1]

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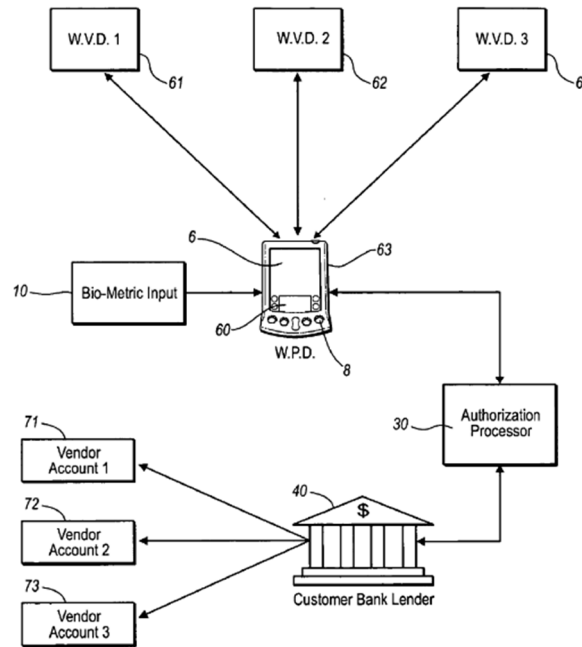


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[9.3]	<p>while the mode is enabled, and as a precursor to performing a second step of said two-step process, transmitting first data to a first device requesting the authorization to establish said capability to perform said at least one financial transaction; and</p>	<p>Smith discloses “while the mode is enabled, and as a precursor to performing a second step of said two-step process, transmitting first data to a first device requesting the authorization to establish said capability to perform said at least one financial transaction; and” See, e.g.:</p> <p>[1.3], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase</p>
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	<p>authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p>
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	<p>Smith at [0020]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p>
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	<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these</p>
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	<p>embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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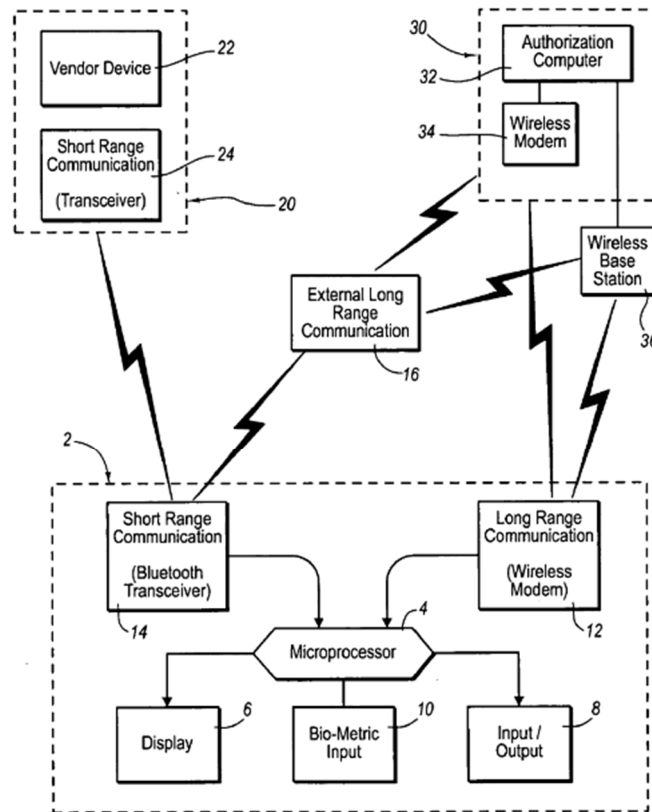


Figure 1

[Fig.1]

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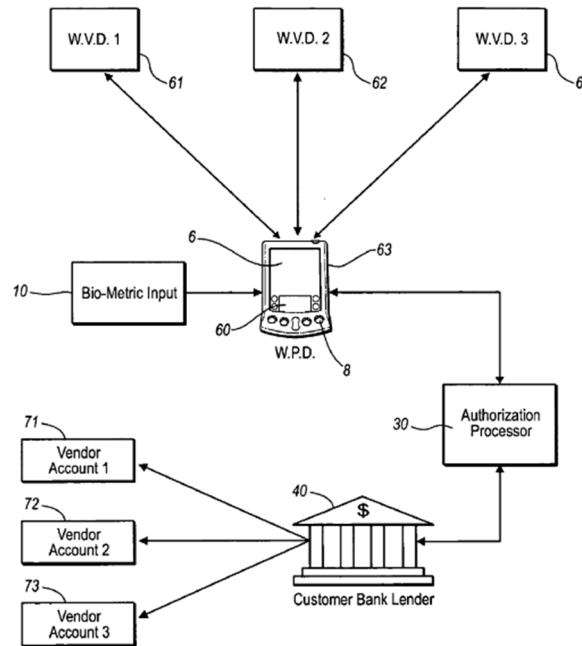


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[9.4]	receiving second data from the first device, comprising the authorization, responsive to said transmitting the first data; then	<p>Smith discloses “receiving second data from the first device, comprising the authorization, responsive to said transmitting the first data; then” See, e.g.: [1.4], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor</p>
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	<p>devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p>
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	<p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on</p>
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	<p>the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of</p>
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		<p>funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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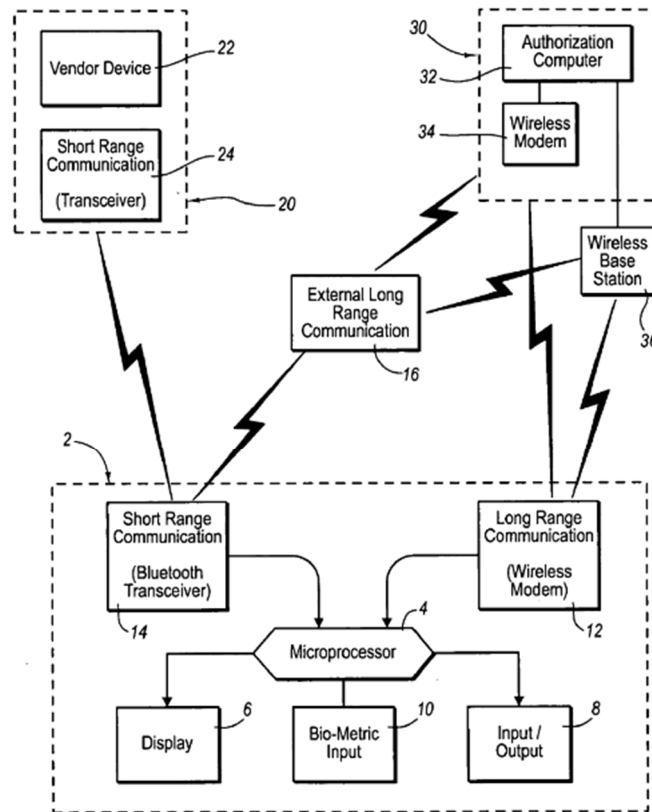


Figure 1

[Fig.1]

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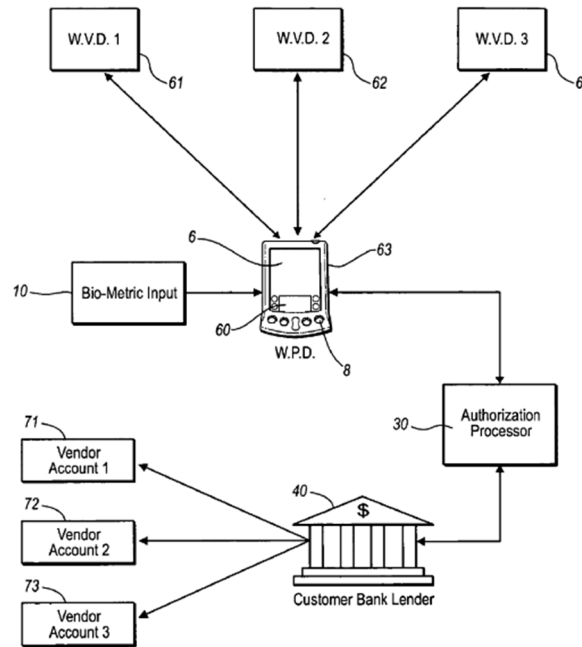


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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<p>[9.5]</p>	<p>performing the second step of said two-step process comprising performing a first financial transaction of said at least one financial transaction, responsive to detecting by the smartphone that a proximity condition is satisfied and responsive to sensing the at least one parameter and determining that the at least one parameter sensed satisfies the criterion;</p>	<p>Smith discloses “performing the second step of said two-step process comprising performing a first financial transaction of said at least one financial transaction, responsive to detecting by the smartphone that a proximity condition is satisfied and responsive to sensing the at least one parameter and determining that the at least one parameter sensed satisfies the criterion;” See, e.g.:</p> <p>[1.5], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted</p>
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	<p>from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range</p>
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	<p>network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range</p>
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	<p>communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device 12 for communication with an authorization provider 30. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at [0030]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a</p>
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	<p>Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor</p>
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	<p>identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and</p>
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	<p>make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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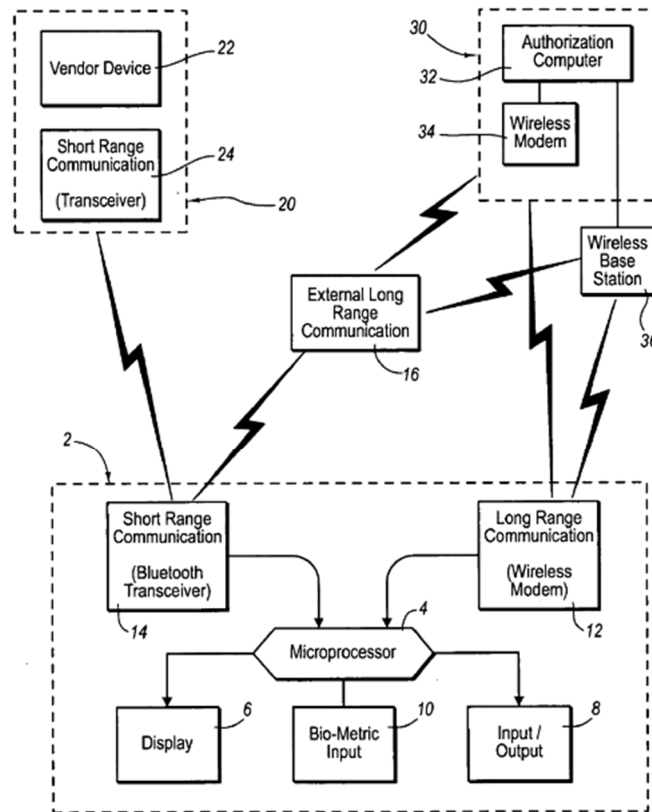


Figure 1

[Fig.1]

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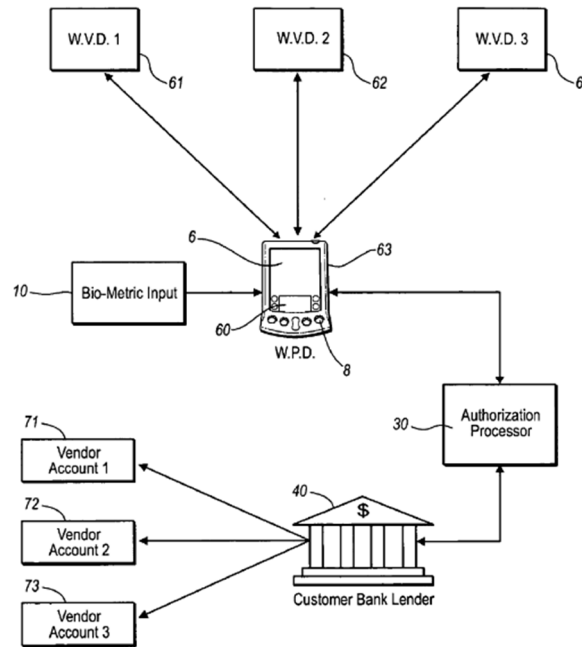


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[9.6]	<p>wherein said performing the second step of said two-step process comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that a value of the at least one parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the at least one parameter sensed satisfies the criterion, paying for a product by selectively sending information to at least one device;</p>	<p>Smith discloses “wherein said performing the second step of said two-step process comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that a value of the at least one parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the at least one parameter sensed satisfies the criterion, paying for a product by selectively sending information to at least one device;” See, e.g.:</p> <p>[1.6], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer</p>
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	<p>of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p>
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	<p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range</p>
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	<p>communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device 12 for communication with an authorization provider 30. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at [0030]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications</p>
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	<p>device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers 30 using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts</p> <p>Smith at [0034]</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items</p>
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	<p>presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD 2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at [0035]</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at [0036]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62</p>
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	<p>and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>When the WPD 2 receives the authorization approval, the approval is displayed to the consumer on display 6 (in embodiments with displays) and a transaction finalization command is transmitted from WPD 2 to WVDs 61, 62 and 63 to instruct WVDs to release the purchased products, provide the purchased services or otherwise credit the consumer for the purchase.</p> <p>Smith at [0039]</p>
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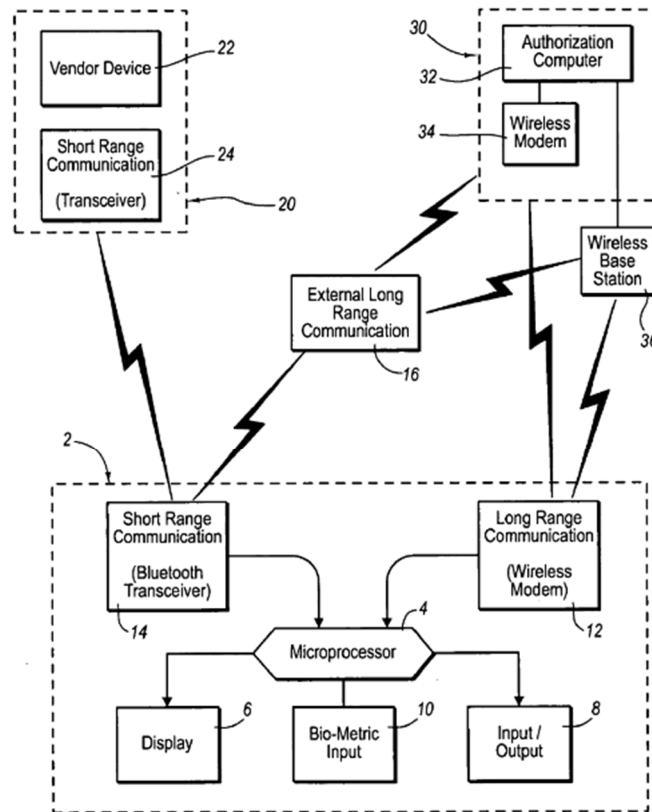


Figure 1

[Fig.1]

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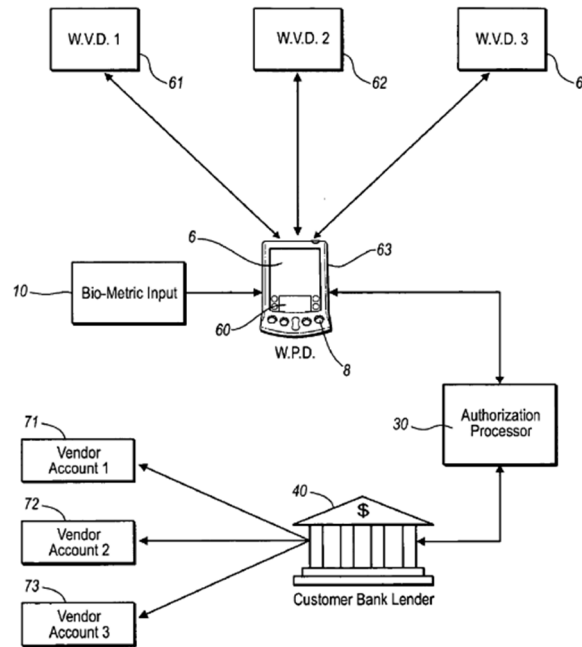


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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<p>[9.7]</p>	<p>wherein said paying for a product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and</p>	<p>Smith discloses “wherein said paying for a product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and” See, e.g.: [1.7], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction.</p>
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	<p>Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p>
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	<p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p>
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	<p>Smith at [0029]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available</p>
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		<p>products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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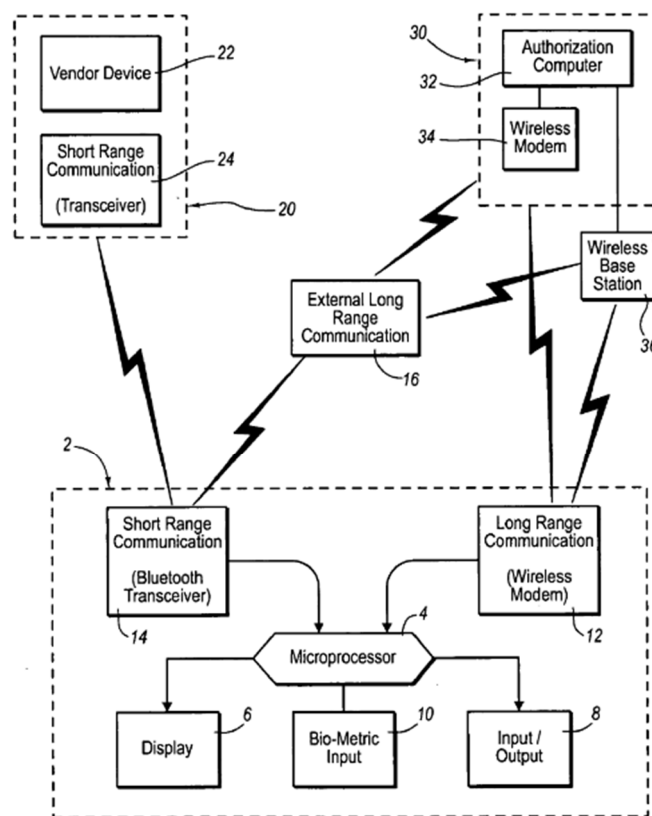


Figure 1

[Fig.1]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as

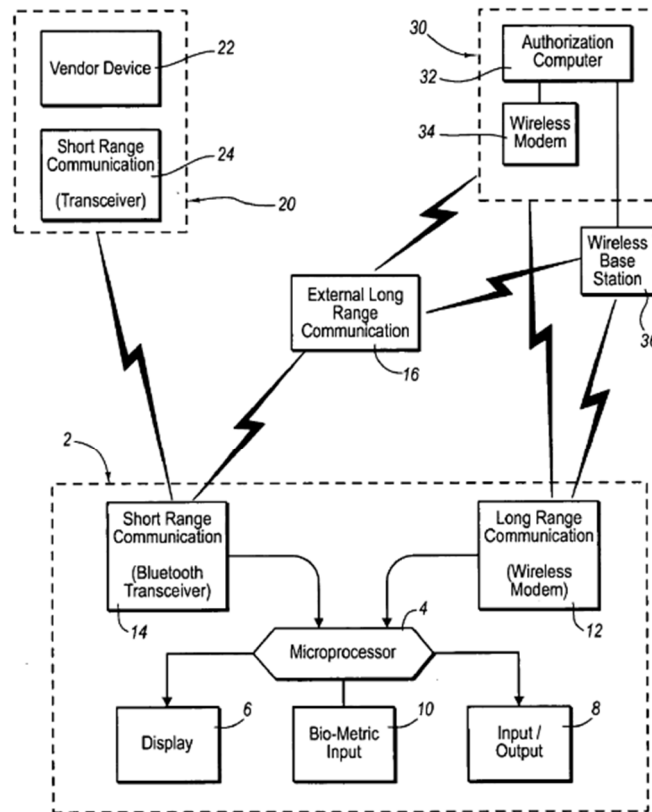
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		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[9.8]	wherein said at least one parameter comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.	<p>Smith discloses “wherein said at least one parameter comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.” See, e.g.:</p> <p>[1.8], supra.</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these</p>

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	<p>embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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[Fig.1]

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		<p align="center">Figure 3</p> <p>[Fig.3]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[10.1]	The smartphone of claim 9,	To the extent the preamble is limiting, Smith discloses “The smartphone of claim 9” See, e.g.:

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		[9.1], supra.
[10.2]	wherein said enabling a mode to communicate by the smartphone information requesting an authorization comprises enabling a first function of the smartphone while disabling a second function of the smartphone responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and further responsive to having determined that the at least one parameter that is sensed satisfies the criterion;	<p>Smith discloses “wherein said enabling a mode to communicate by the smartphone information requesting an authorization comprises enabling a first function of the smartphone while disabling a second function of the smartphone responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and then selectively communicating with the first device by using a communications capability of the first function, selectively establishing a master-slave relationship with the first device, and selectively requesting from the first device the authorization to establish the capability to conduct said at least one financial transaction.” See, e.g.:</p> <p>[2.2], supra.</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth®</p>

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		<p>transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[10.3]	and then selectively communicating with the first device by using a communications capability of the first function, selectively	<p>Smith discloses “and then selectively communicating with the first device by using a communications capability of the first function, selectively establishing a master-slave relationship with the first device, and selectively requesting from the first</p>

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	<p>establishing a master-slave relationship with the first device, and selectively requesting from the first device the authorization to establish the capability to conduct said at least one financial transaction.</p>	<p>device the authorization to establish the capability to conduct said at least one financial transaction.” See, e.g. [2.2], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p>
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		Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[11.1]	The smartphone of claim 10, wherein the operations further comprise:	To the extent the preamble is limiting, Smith discloses “the smartphone of claim 10, wherein the operations further comprise:” See, e.g.: [10.1], supra.
[11.2]	repeatedly sensing the at least one parameter and repeatedly deciding, based on comparing a value of the at least one parameter sensed to the criterion, whether or not to maintain enabled said first function while maintaining disabled said second function; and	Smith discloses “repeatedly sensing the at least one parameter and repeatedly deciding, based on comparing a value of the at least one parameter sensed to the criterion, whether or not to maintain enabled said first function while maintaining disabled said second function; and” See, e.g.: [3.2], supra. Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[11.3]	maintaining enabled said first function while maintaining disabled said second function responsive to deciding that said value of the at least one parameter continues to satisfy the criterion; or	Smith discloses “maintaining enabled said first function while maintaining disabled said second function responsive to deciding that said value of the at least one parameter continues to satisfy the criterion; or” See, e.g.: [3.3], supra.

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		Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[11.4]	disabling said first function and enabling said second function responsive to deciding that the value of the at least one parameter no longer satisfies the criterion.	<p>Smith discloses “disabling said first function and enabling said second function responsive to deciding that the value of the at least one parameter no longer satisfies the criterion.” See, e.g.:</p> <p>[3.4], supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[12.1]	The smartphone of claim 9,	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 9,” See, e.g.:</p> <p>[9.1], supra.</p>
[12.2]	wherein said transmitting first data to a first device is responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and is further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and	<p>Smith discloses “wherein said transmitting first data to a first device is responsive to the at least one parameter having been sensed by the at least one sensor of the smartphone and is further responsive to having determined that the at least one parameter that is sensed satisfies the criterion; and” See, e.g.:</p> <p>[4.2], supra.</p>

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	<p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer</p>
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		<p>may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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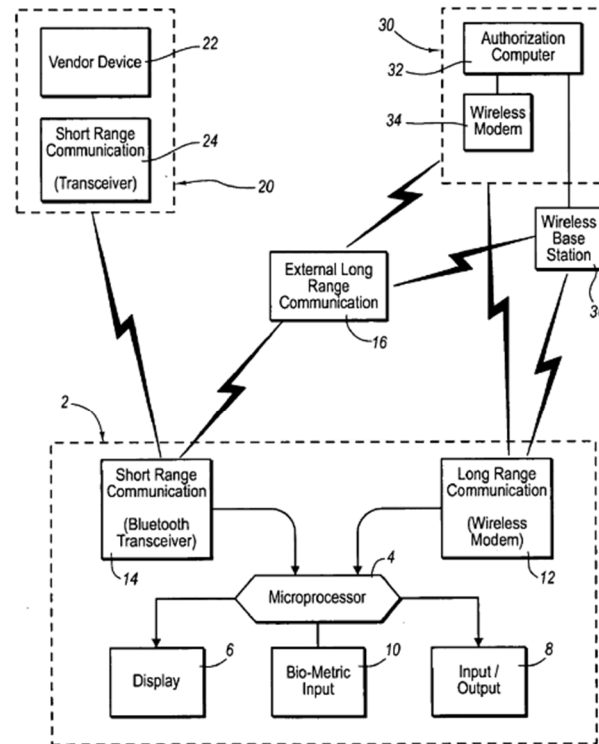


Figure 1

[Fig.1]

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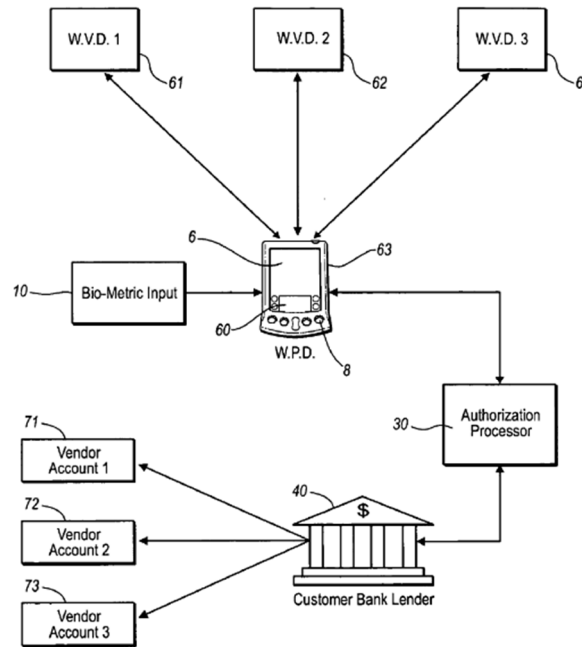


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[12.3]	<p>wherein said receiving by the smartphone second data from the first device is responsive to said transmitting by the smartphone the first data and comprises receiving by the smartphone information relating to an acknowledgement and/or authorization to establish and use t capability to perform said at least one financial transaction.</p>	<p>Smith discloses “wherein said receiving by the smartphone second data from the first device is responsive to said transmitting by the smartphone the first data and comprises receiving by the smartphone information relating to an acknowledgement and/or authorization to establish and use t capability to perform said at least one financial transaction.” See, e.g.:</p> <p>[4.3], supra.</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at [0032]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking</p>
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		<p>technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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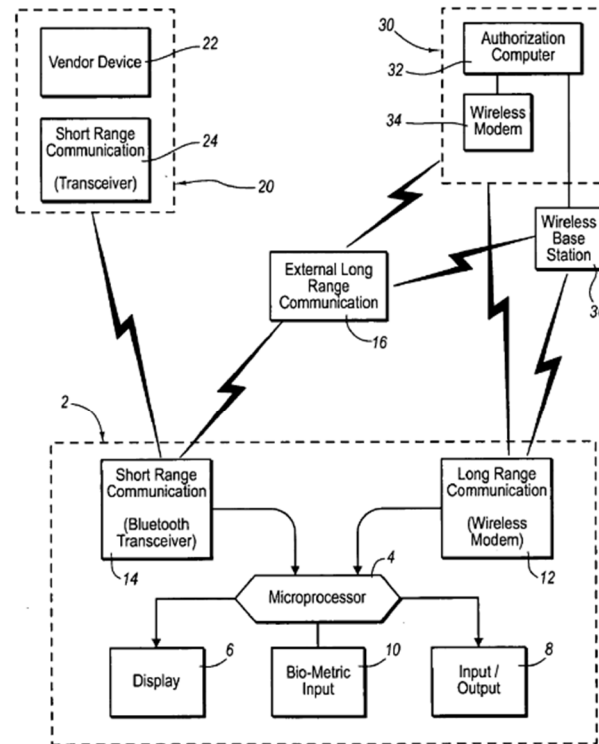


Figure 1

[Fig.1]

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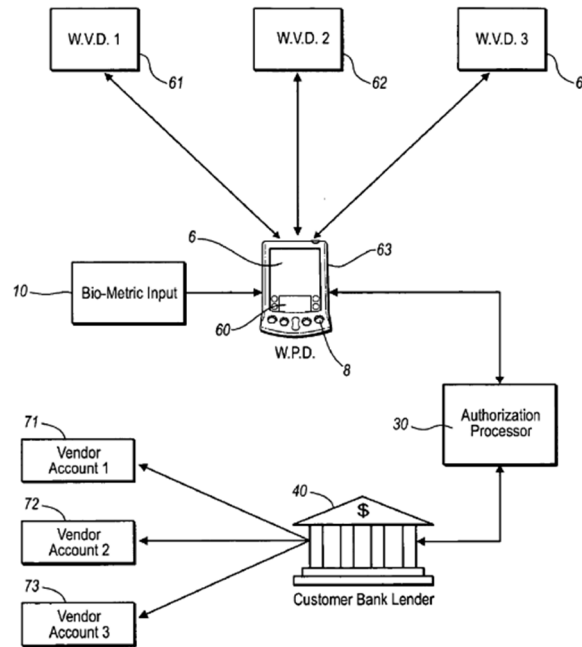


Figure 3

[Fig.3]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.

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[13.1]	The smartphone of claim 9, wherein the operations further comprise:	To the extent the preamble is limiting, Smith discloses “the smartphone of claim 9, wherein the operations further comprise:” See, e.g.: [9.1], supra.
[13.2]	responsive to performing a financial transaction, causing data to be transmitted selectively to at least one device and further causing data to be received selectively from at least one device.	<p>Smith discloses “responsive to performing a financial transaction, causing data to be transmitted selectively to at least one device and further causing data to be received selectively from at least one device.” See, e.g.:</p> <p>[5.2], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the</p>

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		<p>WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[14.1]	The smartphone of claim 9,	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 9,” See, e.g.:</p> <p>[9.1], supra.</p>
[14.2]	wherein said transmitting first data to a first device and said receiving second data from the first device comprises wirelessly transmitting/receiving by the smartphone using unlicensed frequencies, licensed frequencies, a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol.	<p>Smith discloses “wherein said transmitting first data to a first device and said receiving second data from the first device comprises wirelessly transmitting/receiving by the smartphone using unlicensed frequencies, licensed frequencies, a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol.” See, e.g.:</p> <p>[6.2], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD</p>

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	<p>user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection</p> <p>Smith at [Abstract]</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at [0001]</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which</p>
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	<p>may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is</p>
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	<p>transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication</p>
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	<p>with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the</p>
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consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.

Smith at [0038]

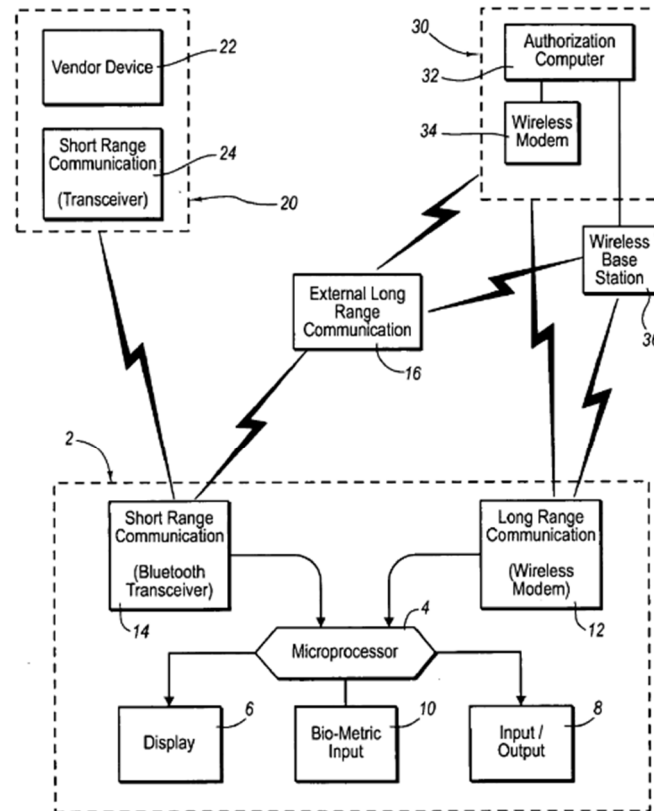


Figure 1

[Fig.1]

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		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[15.1]	<p>The smartphone of claim 9, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.</p>	<p>Smith discloses “The smartphone of claim 9, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.” See, e.g.:</p> <p>[9.1], supra. [7.1], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor</p>

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		<p>information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[16.1]	The smartphone of claim 9,	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 9,” See, e.g.:</p> <p>[9.1], supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.</p>
[16.2]	wherein said using unlicensed frequencies comprises using	<p>Smith discloses “wherein said using unlicensed frequencies comprises using unlicensed frequencies in a Time Division Duplex operation;” See, e.g.:</p>

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	<p>unlicensed frequencies in a Time Division Duplex operation;</p>	<p>[8.2], supra.</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at [0016]</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at [0017]</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at [0018]</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for</p>
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	<p>processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD 2 may communicate with other electronic devices using a short-range communications device 14. Short range communications device 14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device 14 is to communicate with WVDs, and in some embodiments with external long range communication device 16. Short range communications device 14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at [0029]</p> <p>When a consumer already has possession of a cell phone or other long range communications device 16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device 14 to interact with the external long range communications device 16 for contact with authorization provider 30.</p> <p>Smith at [0031]</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is</p>
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	<p>connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at [0033]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p>
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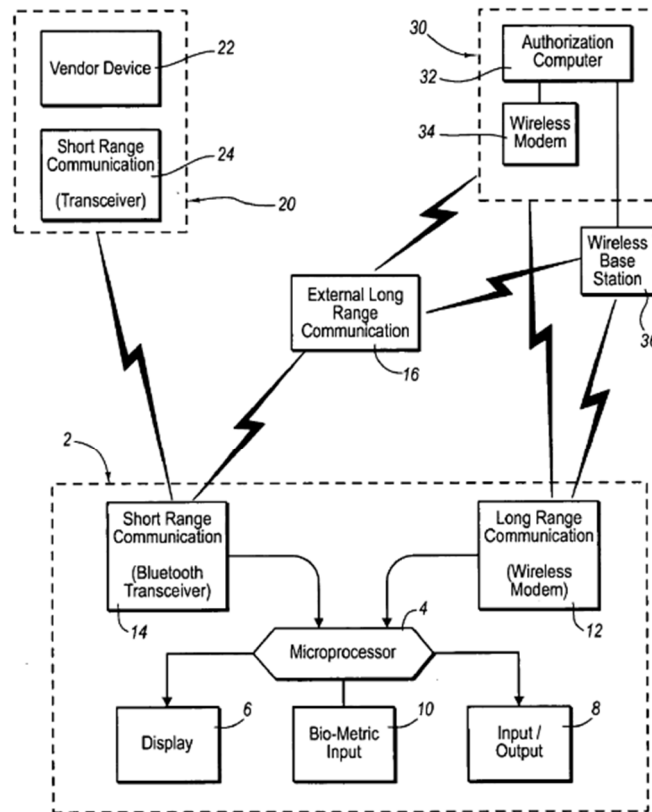


Figure 1

[Fig.1]

Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of

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		ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[16.3]	wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and/or	<p>Smith discloses “wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and/or” See, e.g.:</p> <p>[8.3], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the</p>

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	<p>WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-</p>
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		A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
[16.4]	wherein the operations further comprise selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.	<p>Smith discloses “wherein the operations further comprise selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.” See, e.g.:</p> <p>[8.4], supra.</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at [0019]</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the</p>

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	<p>purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at [0020]</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at [0038]</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 172-A01-</p>
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		A23, Ex. 172-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 172-B.
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