Contactless Payments

Where are we, anyway?

EPRG Contactless Payments Forum
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Agenda

- The path from invention to mass adoption
- The classic case
- The contactless card/payment case
- Where are we in the process?
Indulge me ...
A story of innovation & diffusion
A story of innovation & diffusion

Thomas Edison

First successful long-lasting light filament - carbonized bamboo, 1880
The roots of contactless
The roots of contactless

Robert Watson Watt

IFF-transponder for aircraft circa 1943
The roots of contactless
The roots of contactless

Frank X McNamara

First general-purpose credit card circa 1951
The road from invention to mass usage ... has lots of bumps
The road from invention to mass usage
... has lots of bumps
Technological innovations are rarely seen as revolutionary to contemporaries
Invention/Innovation – the challenges

Contactless payment cards are well beyond the invention stage
Contactless payment cards are still working these challenges in some manner.
Legacy products
Electric lighting
Legacy products
Contactless
Competing inventions
Electric lighting
Competing inventions
Contactless
Supply infrastructure
Electric lighting
Supply infrastructure
Contactless
Demand – pursuing *critical mass*
Demand – pursuing *critical mass*
Demand – pursuing *critical mass*

Electric lighting
Demand – pursuing *critical mass*

Contactless
Standards
Electric lighting

Direct Current

Alternating Current
Standards
Electric lighting

Direct Current

Alternating Current
Standards
Contactless
Trust & risk
Electric lighting
Trust & risk
Contactless
Trust & risk
Contactless

Example of a contactless payments flow

1. RFID based credit card is waved in front of the RFID reader for payment.
2. RFID reader reads the card information and sends it to the POS application.
3. POS application validates the card and sends it to the back office server for authorization.
4. Back office server forwards the transaction to the processor for authorization.
5. Acquirer validates the transaction and forwards it to the card association for authorization.
6. Card association performs the fraud check and if valid forwards to the appropriate issuing bank for authorization.
7. Issuing bank authorizes the card if valid and is within the credit limit. Issuing bank returns the authorization code.
Marketing & promotions
Electric lighting
Marketing & promotions

Electric lighting

PRACTICAL GIFTS
That will delight any woman

Electrical devices for the home—things
that make the duties lighter and the home
together—are the gifts most welcome.
And they exemplify the true Christmas spirit—
the spirit of doing good to others in the most
practical manner.

Why not surprise your wife or mother with a
Western Electric vacuum cleaner—a washing
machine—a dish washer—an electric iron or
an interphone between bedroom and kitchen?
All of these save much hard work and many steps.
Or, why not give her the soothing comfort of a
Western Electric warming pad, or the convenience
of the toaster, or the beauty of the table
lamp? These, and many more needfuls, comprise the list of

Western Electric
Household Helps

They exemplify the high quality of all Western
Electric merchandise, and are guaranteed by the
world’s largest distributors of electrical supplies.
The Bell Telephone, which you use so often, is
made by this company, and is evidence of
Western Electric worth.

This is the “Push-a-Button Age,” in which the
well-equipped housewife has electricity’s power
at her beck and call. Electricity is a willing helper,
and the cost of current to operate any of these
household helps is surprisingly low.

Electrical dealers all over the country sell our
goods. Write to any of our houses in the cities
listed below, and we will send you our booklet,
“An Electrical Christmas,” and tell you where in
your vicinity our goods may be purchased. Ask
for Booklet No. 61-T.

WESTERN ELECTRIC COMPANY
Manufacturers of the 6,000,000 “Bell” Telephones

New York Chicago Kansas City Los Angeles
Chicago Kansas City San Francisco Honolulu
Chicago Kansas City Seattle Cleveland
Boston Philadelphia New York

Western Electric

Equipment for every electrical need
Marketing & promotions
Contactless

INTRODUCING:
MasterCard paypass™
Just Tap & Go
The shape of the future
Where contactless “cards” get revolutionary & scary

Security gets personal
The minute RFID transponder is implanted in the upper arm.
A special transceiver near the entrance scans the person’s unique code which is programmed on the chip.

To database
The code is relayed to a database that verifies the authenticity and instructs an electronic door to be opened.

SOURCE: VeriChip Corp.
Dan Delorenzo • AP

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Discussion