

IMPACT OF MOBILE TECHNOLOGY ON BUSINESS COMMUNICATION

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INTRODUCTION

1. Fixed Network Communications
2. Radio Communications
3. Satellite Communications
4. Cable Communications
5. Mobile Communications

FIXED COMMUNICATIONS

1. Initially point to point low bandwidth/speed using Morse Code
2. Progressed to voice over copper wire
3. Inflexible
4. Required human intervention for switching

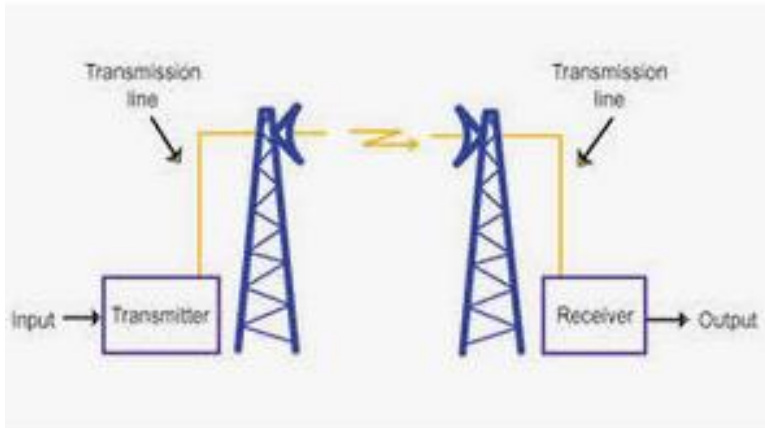


Brentwood Telephone Exchan...
essexsounds.org.uk



RADIO COMMUNICATIONS

1. Enabled long distance communications
2. International
3. Increased the speed of decision making



Microwave Link Networks - Engineering ...
ethw.org



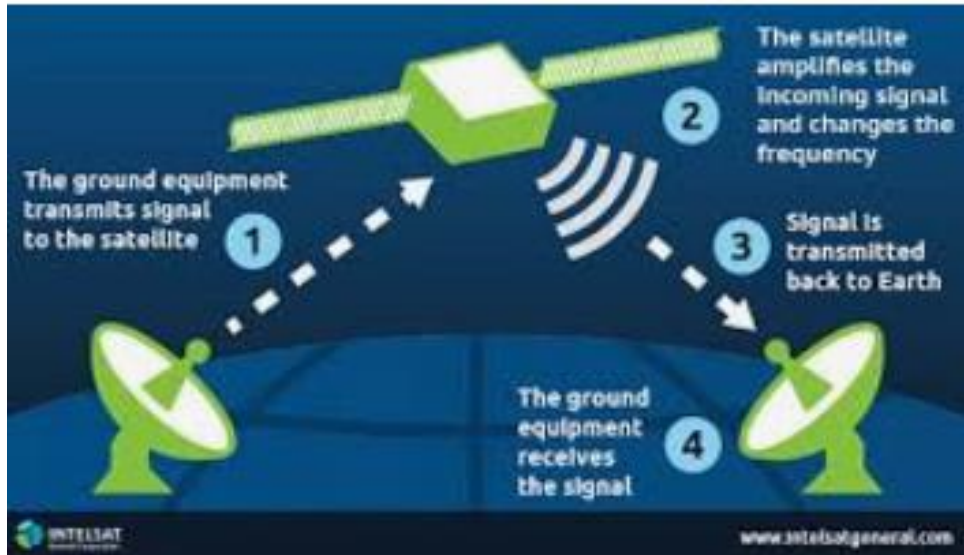
Dr Crippen and wireles...
oldpolicecellsmuseum.or...



A disguised Crippen after his arrest

SATELLITE COMMUNICATIONS

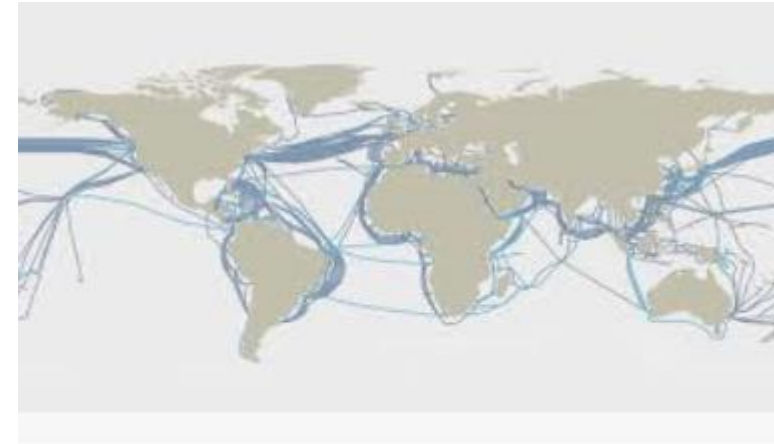
1. Greater distances
2. Access on land, sea and in the air (Intelsat and Inmarsat)
3. Higher bandwidth



Satellite Communications Equipment ...
globalspec.com

CABLE COMMUNICATIONS

1. Wire, coaxial, fibre optics
2. Greater distances
3. Over land and sea
4. Higher bandwidth and speed of connection



Underwater fiber-optic cables could ...
sciencenews.org



fiber-optic cables lie ...
rsaweb.co.za

MOBILE COMMUNICATIONS

1. Flexible
2. Requires radio coverage and spectrum management
3. Requires transmission backhaul

MOBILE COMMUNICATIONS 1G TACS / NMT / AMPS (Analogue)

1. Paging
2. Voice calls
3. Very limited data capability
4. Poor network coverage and performance



Analogue Mobiles - 1G

MOBILE COMMUNICATIONS 2G GSM GPRS/EDGE/MMS DATA (Digital)

1. Improved network performance (efficient use of radio spectrum)
2. Voice calls digitally encrypted (secure)
3. SMS Text and Voicemail
4. Improved although limited data capabilities
5. Many 2G networks in developed countries now being closed down among others
 1. Security industry
 2. Railway industry

2G NETWORK CLOSURES

Country ↕	Network ↕	Total decommission date ↕	Details ▼
New Zealand	Warehouse Mobile	2018	Warehouse Mobile, partnered with 2degrees, shut its 2G network in March 2018, to make way for the new 4G network. ^[20]
Australia	Vodafone	2018	Vodafone closed its legacy GSM network on 30 June 2018. ^[17]
United States	Verizon	2019	Verizon plans to shut down its 2G and 3G CDMA-based network by 31 December 2019 ^[13] , making it the first LTE-only network in United States.
United States	AT&T	2017	AT&T's 2G GSM service was shut down in January 2017. ^{[9][10][11]} This shutdown had a notable impact on the electronic security industry, where many 2G GSM radios were in use for alarm signal communication to central station dispatch centers. 2G GSM radios were required to be replaced by newer generation radios to avoid service outages. ^[12]

MOBILE COMMUNICATIONS 3G

1. Big improvement network performance (efficient use of radio spectrum)
2. Global Positioning System (GPS)/Location-based services
3. Mobile TV
4. Telemedicine
5. Video Conferencing
6. Video on demand.

MOBILE COMMUNICATIONS 4G LTE (LONG TERM EVOLUTION)

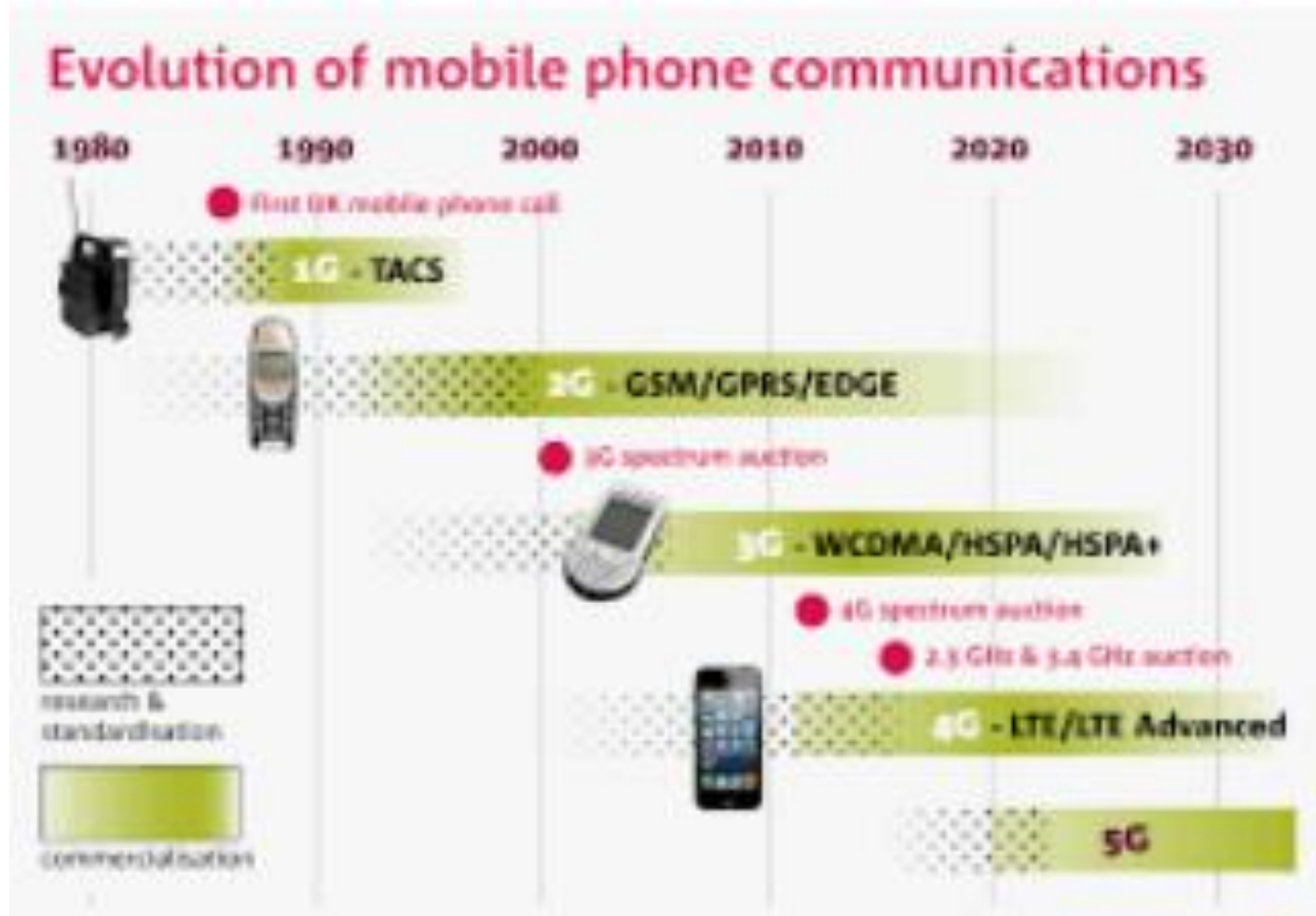
1. Massive improvement network performance (efficient use of radio spectrum)
2. Internet Protocol packet switching (no circuit switching)
3. Mobile web access
4. IP telephony
5. Gaming
6. High definition TV
7. Video conferencing

MOBILE HANDSET EVOLUTION



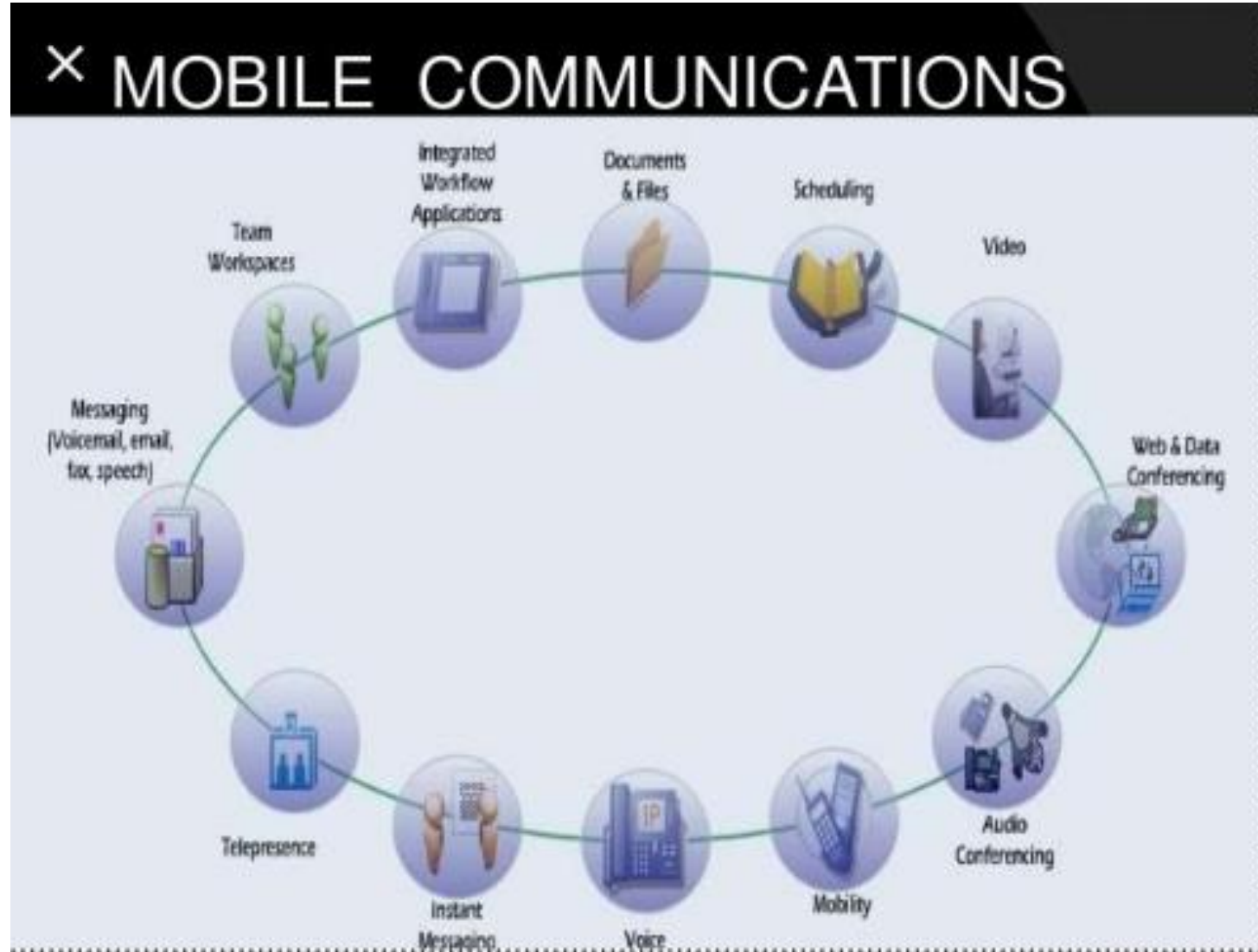
Mobile Generations – 0G, 1G | My Phone ...

EVOLUTION FROM 1G TO 5G

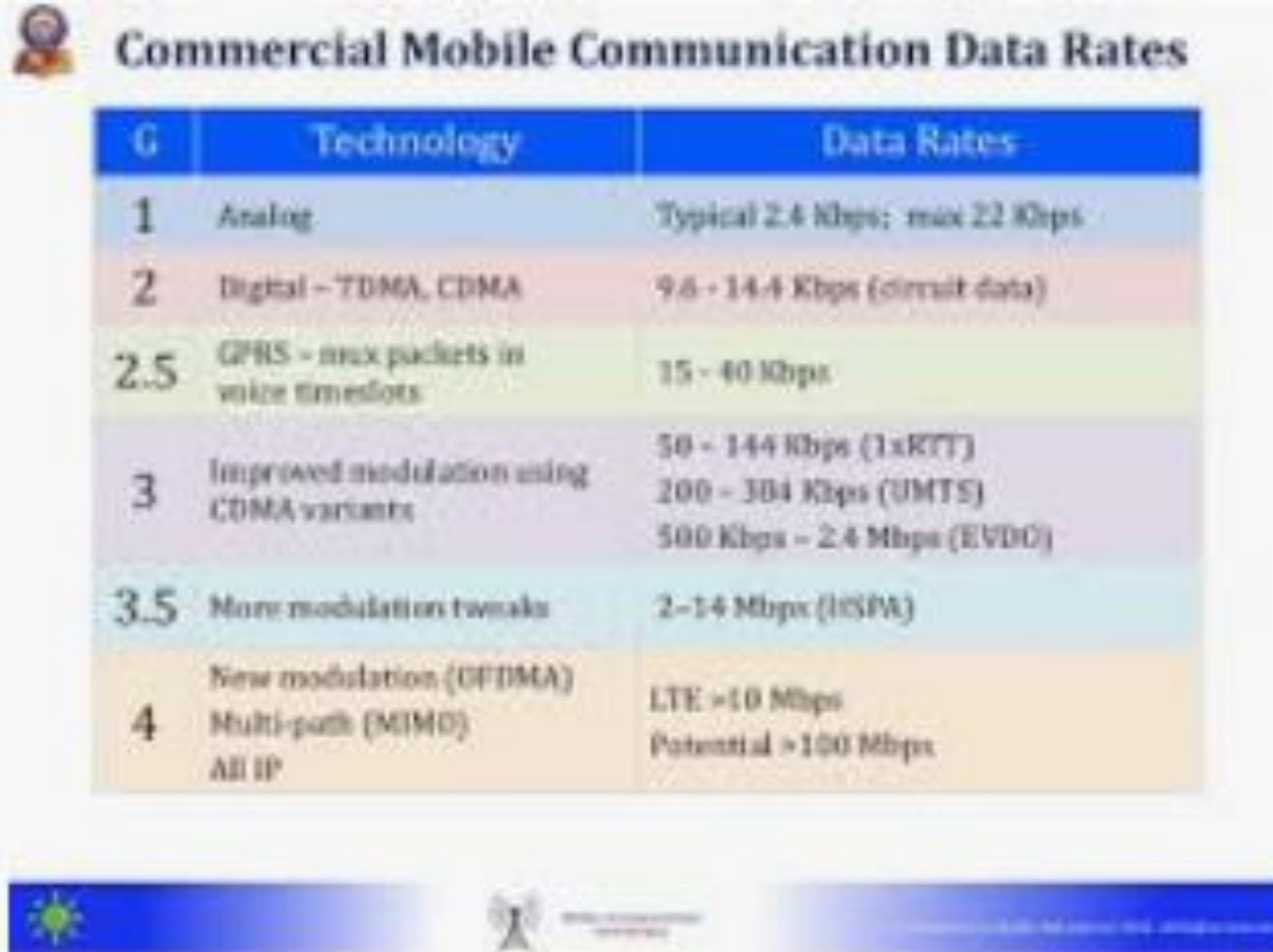


WIKI TECHIE: 5G Mobile Communication

wikitechie.blogspot.com



1G to 4G Data Rates



The table is titled "Commercial Mobile Communication Data Rates" and is presented in a grid format with a blue header. The header has three columns: "G", "Technology", and "Data Rates". The rows are color-coded: 1G is light blue, 2G is light red, 2.5G is light green, 3G is light purple, 3.5G is light cyan, and 4G is light orange. The 4G row is split into two sub-rows. At the bottom of the table, there is a blue bar with a sun icon on the left, a person icon in the center, and a signal strength icon on the right.

G	Technology	Data Rates
1	Analog	Typical 2.4 Kbps; max 22 Kbps
2	Digital - TDMA, CDMA	9.6 - 14.4 Kbps (circuit data)
2.5	GPRS - max packets in voice timeslots	15 - 40 Kbps
3	Improved modulation using CDMA variants	50 - 144 Kbps (1xRTT) 200 - 384 Kbps (UMTS) 500 Kbps - 2.4 Mbps (EVDO)
3.5	More modulation tweaks	2-14 Mbps (HSPA)
4	New modulation (OFDMA)	LTE >10 Mbps
	Multi-path (MIMO) All IP	Potential >100 Mbps

Mobile Communications - GPREC TechTalk
slideshare.net

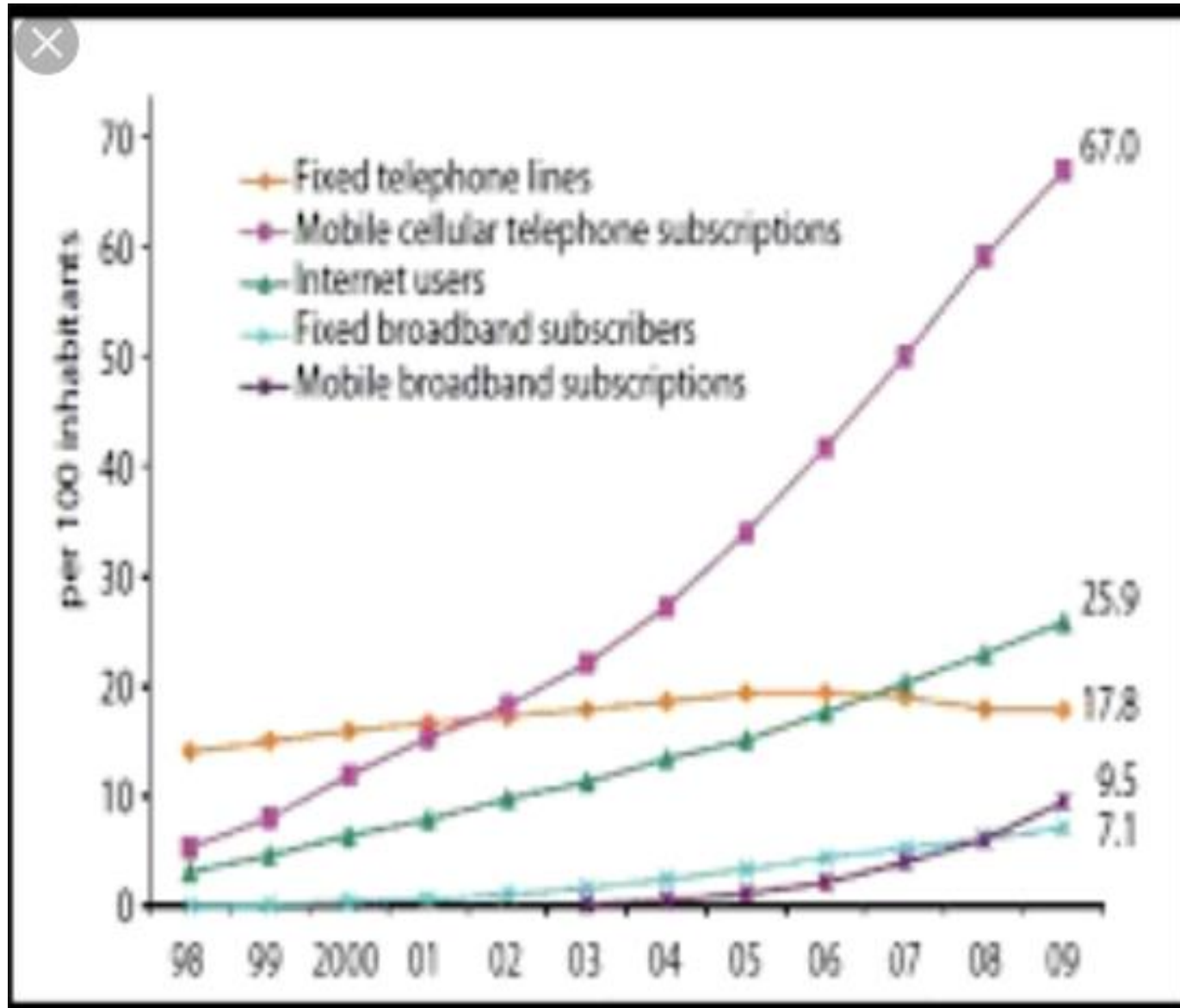
MOBILE COMMUNICATIONS 5G

1. Massive MIMO (Multiple input multiple output)
2. WIFI / Cellular convergence
3. EDGE Computing
 1. Cloud computing closer to the user reducing latency and data congestion
4. Small Cell distributed antennae

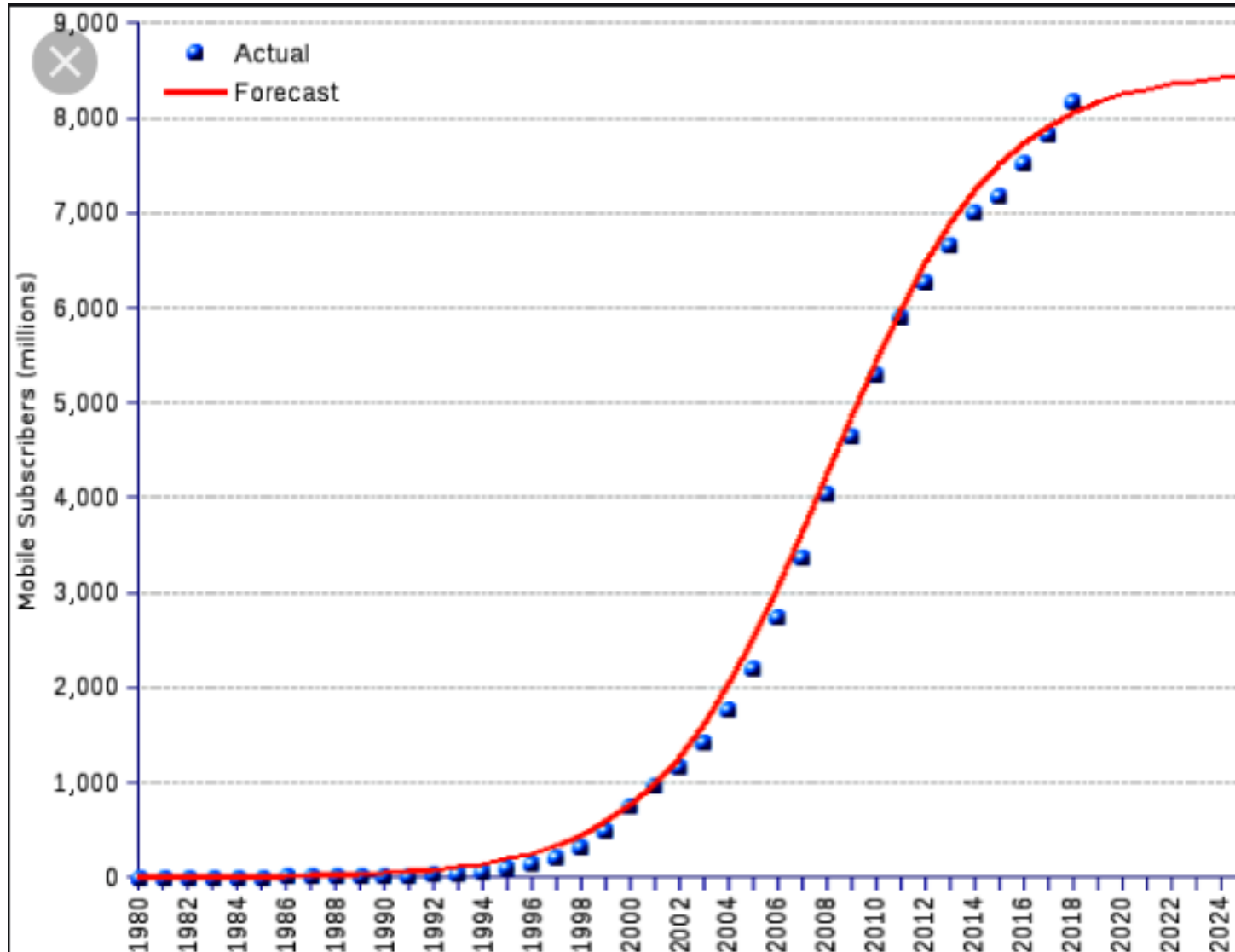


- **A standard mobile device has gone from being no more than a simple two-way pager to being:**
 - **Sophisticated mobile device**
 - **GPS navigation device**
 - **Embedded web browser**
 - **Instant messaging client**
 - **Handheld game console**
 - **Tablet computer or laptop**
- **Experts argue that the future of computer technology rests in mobile computing with wireless networking.**

GROWTH OF MOBILES v OTHER MEDIUMS (INDICATIVE)



GROWTH OF MOBILE PHONES & FORECAST 1980-2024



IMPACT ON BUSINESS COMMUNICATION

1. ENABLED GLOBAL COMMUNICATION ON AN UNPRECEDENTED SCALE VOICE, DATA AND VIDEO
2. DRAMATICALLY IMPACTED RETAIL SALES ie AMAZON, ALIBABA
3. DRAMATICALLY INCREASED SOCIAL MEDIA ACCESS ie FACEBOOK, WEIBO, etc
4. HAS INCREASED THE ABILITY TO TRACK VEHICLES, PRODUCTS, OTHERS THROUGHOUT THE WORLD ie GPS, LBS

IMPACT ON BUSINESS COMMUNICATION

IMPACT OF TECHNOLOGY ON BUSINESS

Technology Today

Technology enables us to:

- Communicate instantly across the world
- Have documents arrive instantly
- Conduct business meetings hundreds of miles apart
- Perform E-commerce
- Attain worldwide exposure through Internet Marketing

Everything comes with its pros and cons depends on the way its used ,as on of the disadvantage
Increase of cyber crime phishing spam etc.
Lack of privacy



IMPACT ON BUSINESS COMMUNICATION



IMPACT OF MOBILES IN PNG

- Provided wide area coverage in all major cities, towns and highways
- Enabled people from all walks of life to communicate
- Improved social welfare and for expectant mothers in remote areas
- Enabled the Security and Transport industries to track vehicles and stock
- Provided eCommerce opportunities
- Enabled remote workers to be in touch with HQ
- Provided access to social media, email and other forms of media

IMPACT OF MOBILE TECHNOLOGY ON BUSINESS COMMUNICATION

Thank You