

Analysis Increasing Network Signal of Dongle

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Abstract--This paper gives now a day's everywhere there is the need of internet. Everyone wants to access internet on mobile phones, system and laptops. Internet can be accessed on a system either wired or wireless. Internet dongle is used to access internet on systems wirelessly. The aim of this paper is increase network signal strength of dongle with increasing speed of internet

I. INTRODUCTION

Use of internet is day-by-day increasing today. There are various option for internet access like Ethernet cable, through telephone line, wireless technologies like usb dongles, Wi-Fi etc. Among above USB dongle option is also most popular and mostly used for internet access with laptops, computers, tablet etc. devices.

Internet dongle is part of the wireless technology and is use to authenticate some software. This hardware is plugged into the PC through the USB port and its frequency is used as a wireless internet access point.

In Indian market there are number of service provider like (AIRTEL, IDEA, VODAFONE, DOCOMO, etc.) give us 2G speed actual as per there specification on internet website they gives us this much amount of speed but when we connect with their access point the speed is decreased because of environment ,atmosphere and the location where you connect your dongle sometimes the signal is not in proper strength so using this technique you can increased your signal strength and also you can received a good speed of uploading and downloading speed rate. As per the given specification of internet speed rate cannot be achieved actual use of dongle. So given technique in this paper can help to achieve specified speed of internet for per titular dongle.

II. BASIC THEORY

As shown Fig.1, if parabolic shape type of aluminum foil is used as back side of dongle. And dongle is place at loci of parabola shown in fig.1 .As per the above loci of parabola is as following equation

$$F(x, y) = y^2/4x \quad (1)$$

Signals are impacted at parabolic aluminium foil and concentrated at loci of parabolic aluminium foil called the focus which will increase concentration at focus point. At that point signal strength is highest as comparison of other points of surrounded of loci of parabolic aluminium foil.

As per above equations the strength is varied with (x, y) coordinate point of given X-Y plane. Optimized point is to get the highest internet speed is at focus of parabola of given aluminium foil.

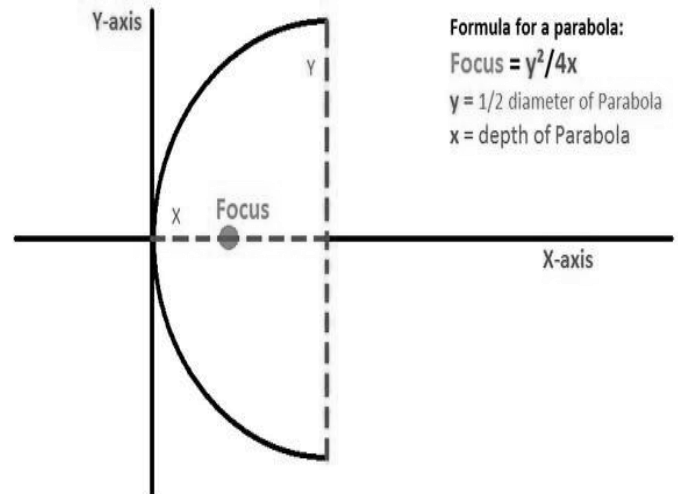


Fig (1): Focus at witch signal is collected.

III. INTRODUCTION

Surface treatment is an important aspect of all manufacturing processes. It has been used to impart certain physical and mechanical properties, such as friction, corrosion, wear and fatigue resistance. The function performance of a machined component such as fatigue strength, load bearing capacity, friction, etc. depends to a large extent on the surface as hardness, nature of stress and strain induced on the surface region. During recent years, however, considerable attention has been paid to the

Post-machining metal finishing operation such as burnishing which improves the surface characteristics by plastic deformation of the surface layers. Roller Burnishing is the plastic deformation of a surface due.

Roller Burnishing is a Super-finishing process. It is a Cold Working process which produces a fine surface finish

By the planetary rotation of hardened rollers over a bored or turned metal surface

IV. PRACTICAL IMPLEMENTATION AND AFFECTING FACTORS

As per below fig.2,3,4 Different methods for Practical implementation of parabolic foil with dongle for increasing signal strength. Factor affects speed of internet is as below

- (1) Configuration of dongle
- (2) Type of material used (like aluminium etc) Foil used for parabolic shape shown in fig.2
- (3) Proper location as per equation (1) of dongle
- (4) Diameter of parabolic shape shown in fig.2

(5) Nearby number of signal towers and location of set up.



Fig (2)



Fig (2), (3), (4) Different methods for Practical implementation of parabolic foil with dongle for increasing signal strength

V. COMPARISON BETWEEN WITHOUT SET-UP AND WITH SET-UP OF ALUMINUM FOIL WITH DONGLE

As Per the same technical criteria's given in above section, from fig 3. It can be conclude that with set-up of parabolic foil and dongle is increasing internet speed average rate for download to 4.89 Mbps and without set-up of parabolic foil is internet speed average rate of download 2.71 Mbps, So approximate difference between set-up of parabolic foil and dongle and without set-up of parabolic foil and dongle is 2.18 Mbps. With following practical analysis results shown in fig.3 are taken with as given below type of dongle model no.E1731

Detail parameters are as followed

Speed	HSDPA 7.2Mbps, HSUPA 5.76Mbps
Network	customized simlock to airtel network, plug n play
Chipset	qualcomm MSM6290
Radio for 3G	HSDPA/UMTS 2100 MHz, receive diversity
also compatible with	EDGE/GPRS/GSM 850/900/1800/1900 MHz
GSM/CDMA	GSM/WCDMA
Size	71mm*26mm*12.5mm
Messaging	yes
VID/PID	12D1/140C
Micro SD Support	yes (up to 32GB)
Antenna	Inbuilt antenna
OS	windows 2000 SP4,windows XP SP2/SP3, windows vista SP1/SP2, windows 7 mac OSx10.4, 10.5 & 10.6 with latest upgrades
USB	2.0 HS



Fig (3)



Fig (4)

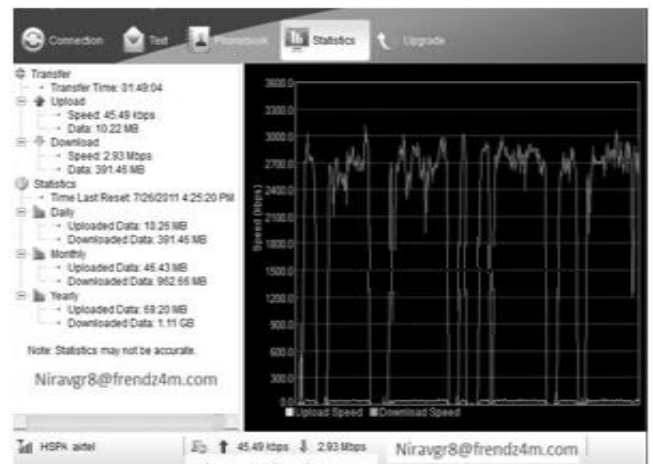


Fig (5)

Table (1): specification of dongle used for analysis of set-up of parabolic foil.

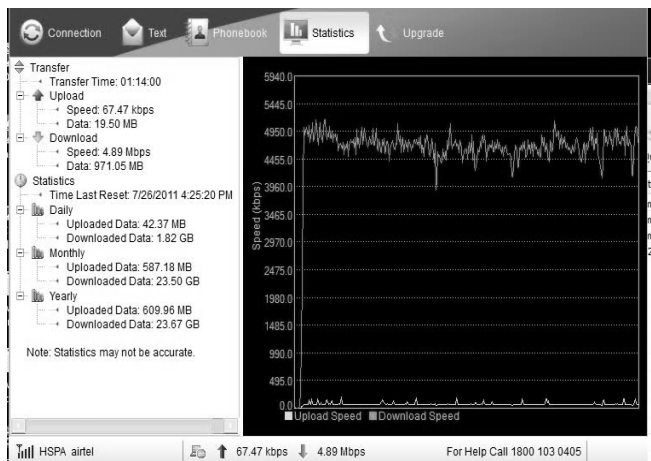


Fig (6)

Fig (5), (6): Comparison between without set-up and with set-up of aluminium foil with dongle, Figure shows internet speed is increasing with set-up.

From above practical result, shown in fig.5, 6 it is advantageous to implementation of this type of set-up for better performance of dongle. It will increase approximate double internet download speed rate under given same technical criteria's. It is cheaper to make this type of set-up for better performance of dongle.

VI. CONCLUSION

As Per the same technical criteria's given in above section, from fig 5,6 It can be conclude that with set-up of parabolic foil and dongle is increasing internet speed average rate for download to 4.89 Mbps and without set-up of parabolic foil is internet speed average rate of download 2.71 Mbps. So approximate difference between set-up of parabolic foil and dongle and without set-up of parabolic foil and dongle is 2.18 Mbps, From above practical result, shown in fig.3, it is advantageous to implementation of this type of set-up for better performance of dongle. It will increase approximate double internet download speed rate under given same technical criteria's. It is cheaper to make this type of set-up for better performance of dongle.

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