Slide: 01

* Assalamualaikum everyone!! Welcome to my presentation.

* This Md. Abdul Kayum, from HSTU (Tell full form), Dinajpur.

* My Paper ID 485 & the title is "Integration of T-shaped Notch Filter Elements into a UWB Antenna to Reduce EMI of WiMAX/N78 and N79 Bands"

Slide: 02 (Outlines)

* At first, I'll briefly dicuss about UWB technology, with its applications, and some design challenges.

* then our main objectives.

* after that, the design procedure of the proposed notch filter element.

* Finally, the results will be discussed with a comparison table.

Slide: 03 (Introduction)

* Antenna is a (read from slide "- front end component....).

 It can (-radiate and receive....)

* Ultrawide band, It's a high speed technology to transmit large volume of information using low power radio signal. It has a lincence free frequency spectrum, 2.97 GHz to 10.76 GHz.

* UWB is mostly used for the following applications (read slide for applications).

Slide: 04

* There are some overlapping services with UWB.

For example, (read your slide)

* Also, there are some antenna design challenges,

for examples, (read your slide)

Slide: 05 (Objectives)

* The main objectives of our work, (read your slide)

- To design simple intrinsic notch filter element

- To block the EMI due to WiMAX/N78 band

- To block the EMI due to N79 band

- To attain satisfactory performances over the operating band

Slide: 06 (Simulation Tool)

* We have used Coputer Simulation Technology (CST) version 2018

* It's a   High performance 3D EM analysis software

▪ Flexible to analysis

▪ Having different simulation techniques

Slide: 07

(Notch Filter Design Procedure)

* We have used, copper for ground & patch; (similarly, read your slide).

Slide: 08 (Notch Filter Design Procedure)

(Important slide)

* Fig.1 shows the Final geometry of the UWB antenna with proposed Notch filter element

* Here, There are two T shaped slot , this slot acts as an Intrinsic filter element.

* It consists of horizontal & vertical slots

* The overall length of the filter element are estimated by the equations (1), (2), & (3)

* The calculated length was ... (read slide), after optimization, we have used only (read slide) to eliminate the WiMAX band.

Slide: 09

Nije bolo figure deke

Slide: 11 (Results: VSWR)

Nije bolo figure deke

Slide: 12 (Results: Gain)

Nije bolo figure deke

Slide: 13 (Results: Efficiency)

Nije bolo figure deke

Slide: 15 (Comparison Table)

* Table II shows the comparison of the proposed work with some recent works.

* we observed that the proposed design has comparatively compact size.

* It covers entire UWB spectrum, filter out the WiMAX/N78 and N79 band with unique 2 T-shaped filter element.

* The maximum radiation efficiency is 95%.

* Therefore, the proposed design is comparable to others.

Slide: 16 (Conclusion & Future work)

* Therefore, the overall features are .....(Read your slide)

* In future, reconfigure notch filter can be designed for filtering multiple interfering bands. Also, the design can be fabricated in future.

Slide: 17 (References)

* These are the references, we used in our work.

Slide: 18 (Thanks giving)

* Thank you everyone!!

* If you have any queries or suggestions, you are welcome.

WiMAX Applications:

1. **Broadband Internet Access**
2. **Rural & Remote Connectivity**
3. **Mobile Data Services**
4. **Enterprise Networks**
5. **Public Safety & Emergency Services**

N79 (5G) Applications:

1. **5G Mobile Networks**
2. **Enterprise & Industrial 5G**
3. **Augmented Reality (AR) & Virtual Reality (VR)**
4. **Cloud Gaming & Streaming**
5. **Autonomous Vehicles & Smart Transportation**

6. • **WiMAX – Worldwide Interoperability for Microwave Access**

7. • **N79 – It is a 5G NR (New Radio) frequency band ranging from 4.4 GHz to 5.0 GHz, primarily used in Asia. It does not have a full form like WiMAX.**