



Connecting Agumbe: The Malgudi Days Town of India!

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IEEE Bangalore Section

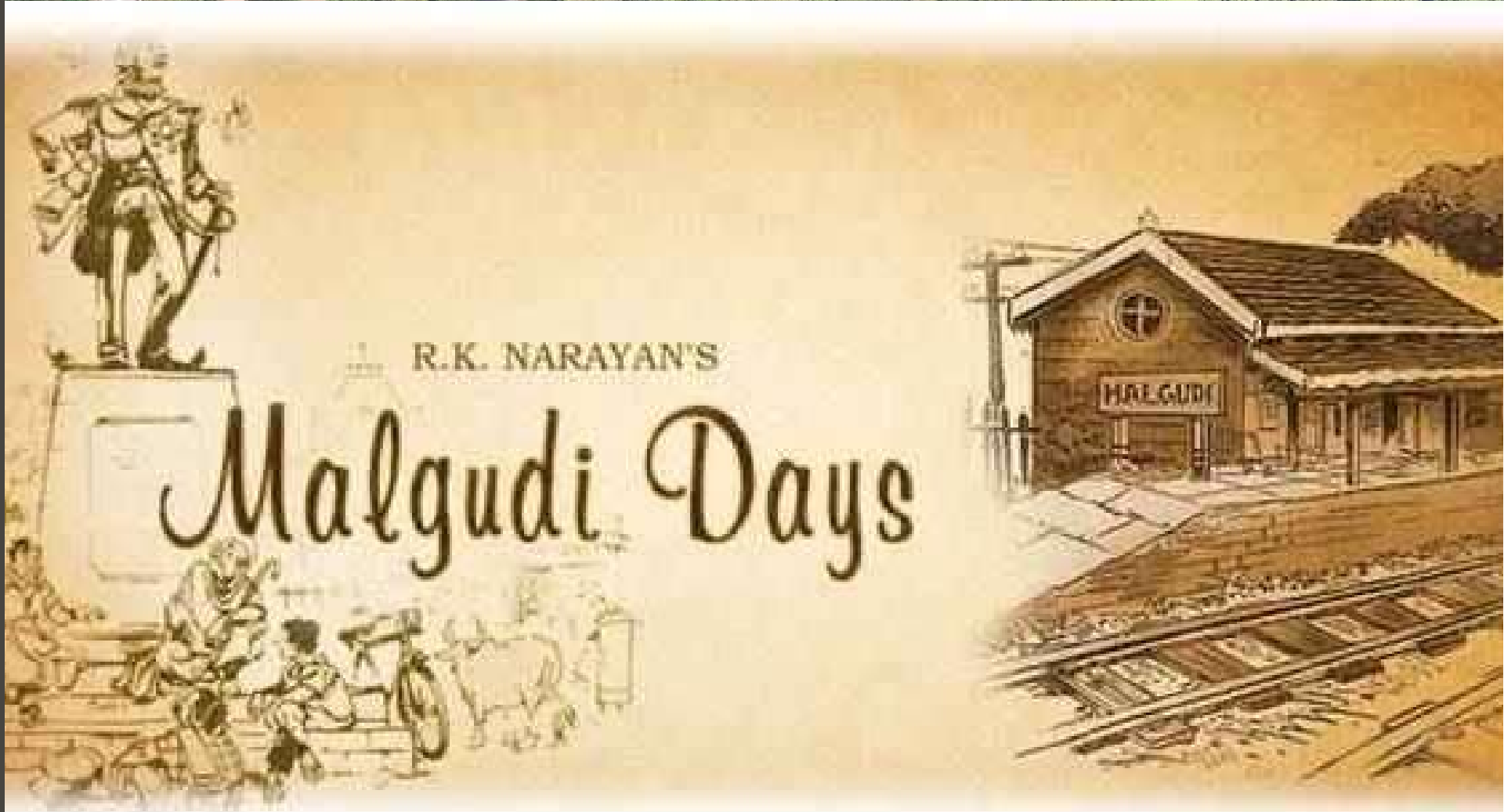
IEEE Mangalore Subsection

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Agumbe!

- Rainforest in Karnataka
- UNESCO World Heritage Site
- 600m above the sea level
- Annual rainfall: 7620 - 7640 mm
- Cherrapunji of the South
- Land of King Cobras
- Western Ghats Mountain Range
- Mountain Pass
- 14 hairpin bends
- 400+ homes
- Popular Tourist Place
- The Malgudi Days Town of India!
- **No Network Zone till 2025!**



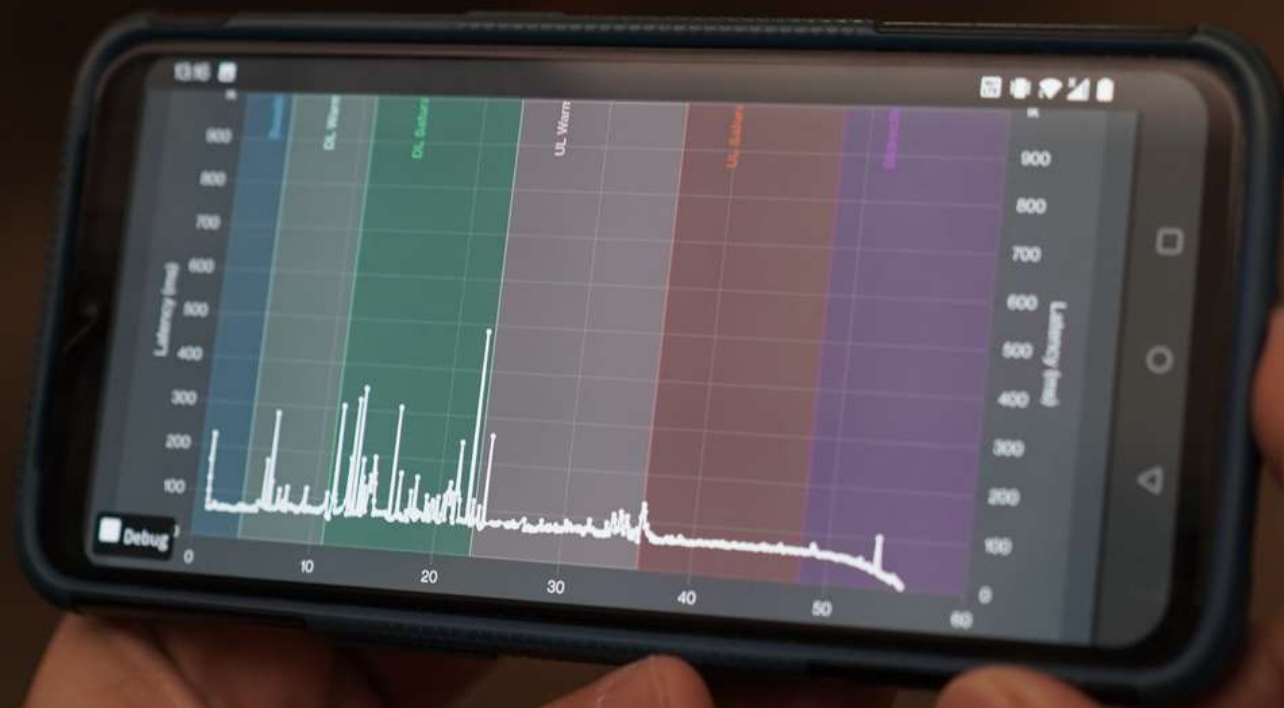


Challenges!

- D e n s e f o r e s t
- N o p o w e r d u r i n g m o n s o o n f o r d a y s
- S u r r o u n d e d b y m o u n t a i n s
- R u g g e d t e r r a i n
- M o n k e y s :)
- C o m m u n i t y W i F i m e s h n o t p o s s i b l e
- N o u s e o f W i F i H o t s p o t s
- H i g h c a p i t a l c o s t f o r L C O s
- L a c k o f t e c h n i c a l k n o w l e d g e
- U n s a t i s f i e d c u s t o m e r s
- E x p e n s i v e f o r c u s t o m e r s
- N o v a l u e - f o r - m o n e y

Promoting HEALTH in Agumbe

Funded by: IEEE ComSoc, IEEE Tech4Good,
and Samsotech



HEALTH

H e a l t h c a r e

E d u c a t i o n

A g r i c u l t u r e

L i v e l i h o o d

T e c h n o l o g y

H e r i t a g e



GOALS

M e a n i n g f u l C o n n e c t i v i t y

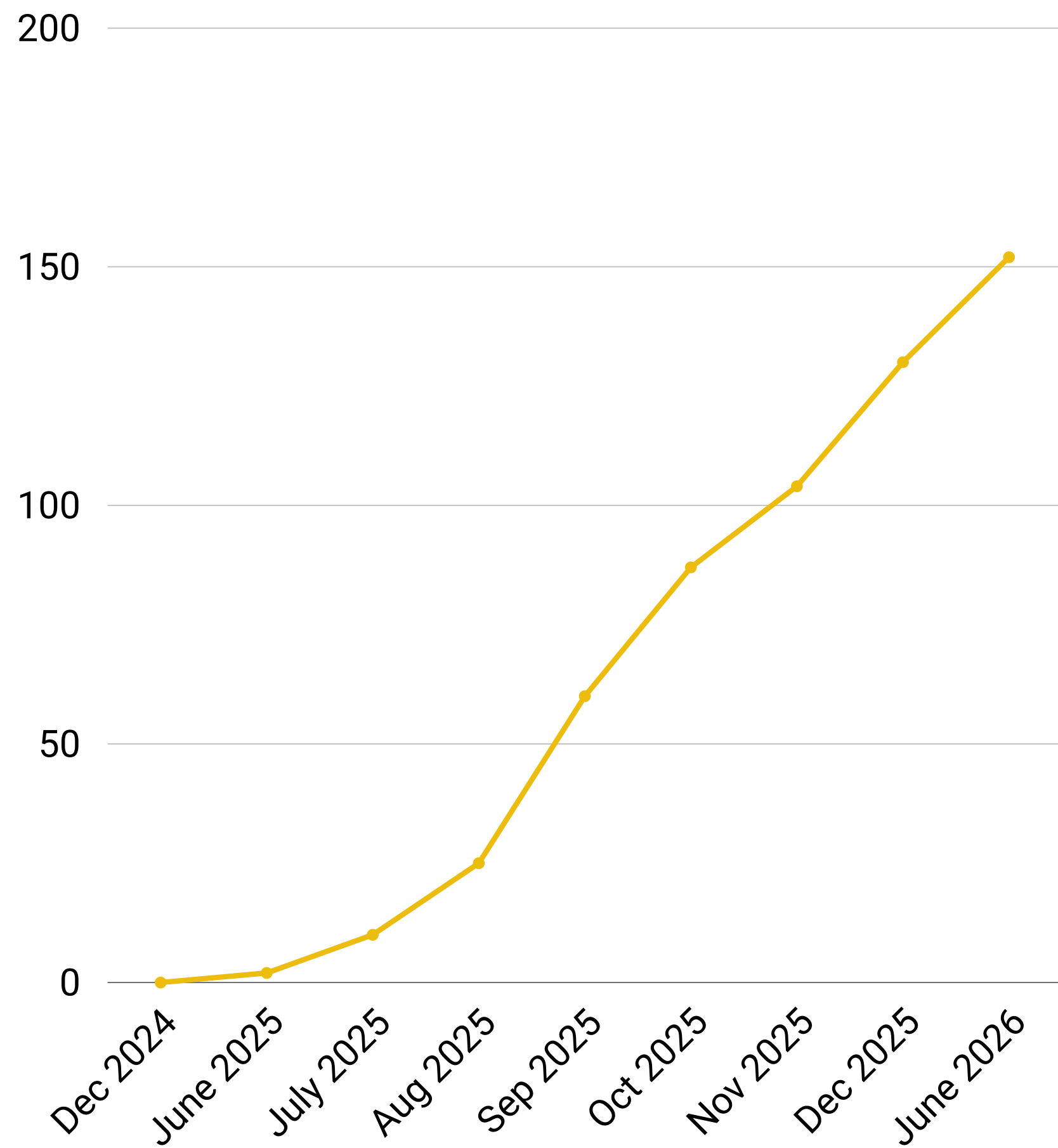
S e l f S u s t a i n a b l e

C o s t E f f e c t i v e

U s e r S a t i s f a c t i o n

V a l u e - f o r - M o n e y

152 connections in 18 months!





Connected!

Schools

Hospitals

Orphanage

Home Stays

Bus Station

Restaurants

Police Station

Rashan Societies

Grama Panchayat

People working from home

King Cobra Research Centres





Optic Fibre based connectivity

Last mile WiFi

Tested for meaningful connectivity



Measurements!

- Focus on Latency
- Tools used:
 - Bufferbloat Test
 - LibreQoS
 - WLAN Pros Toolbox
 - Flent Tests
 - RRUL
 - TCP-UP
 - TCP-DOWN

5 GHz - SVS Agumbe

Any recommendations on measurement methodology?



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2.4 GHz - SVS Agumbe



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>80% deployments use IPv6



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2.4 GHz - GHPS

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Project documentary



Thank you!

Wild animals crossing our path, an elephant halting our work, a cobra entering the car, relentless monsoon rains, mist-shrouded mountains, terrifying drives along hairpin bends and low-visibility roads, leeches clinging to us, villagers dancing on the streets as cables were installed, and the tearful eyes of parents welcoming their children returning to live and work remotely; we witnessed it all, every raw, unforgettable moment.

Agumbe has my heart ❤️

-- Dr. Mohit P. Tahiliani

