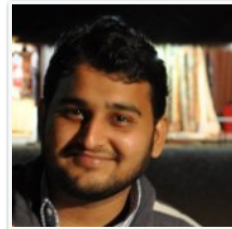GAIUS NETWORKS

Team

A team with a 30+ years of combined experience building, deploying and managing networks

Yasir Zaki
Co-Founder & CTO

Talal Ahmad
Co-Founder & COO

Thomas Poetsch
Co-Founder & CPO

Lakshminarayanan Subramanian
Co-Founder & CSO

Arjuna Sathiaseelan
Co-Founder & CEO

Jay Chen
Co-Founder & Chief Scientist

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The Problem

Mobile users want ubiquitous access to content with seamless user experience

Operators need innovative last mile solutions for enabling ubiquitous and ultra-fast access

Content providers and app developers need lightweight and ultra fast service delivery

Need for seamless user experience for challenged environments

Need for platforms for enabling local content generation, distribution and consumption

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Mobile Web in Challenging Environments

Server Latencies are extremely high (>2-3 secs)

Recursive DNS lookups can be very expensive (>10-15 secs)

Web pages are unnecessarily complex (>100 objects)

Web content comes from several servers (>30)

Can we make mobile web content simple, ultra-lightweight, ultra-super fast and provide a great user experience?

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GAIUS Networks

Make content ultra-lightweight

Novel mobile app specification language

Lightweight content ad platform

Make content ubiquitous & faster

High performance mobile stack

Scalable edge cloud platform

Highly optimised content diffusion framework

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5

GAIUS Networks Ecosystem
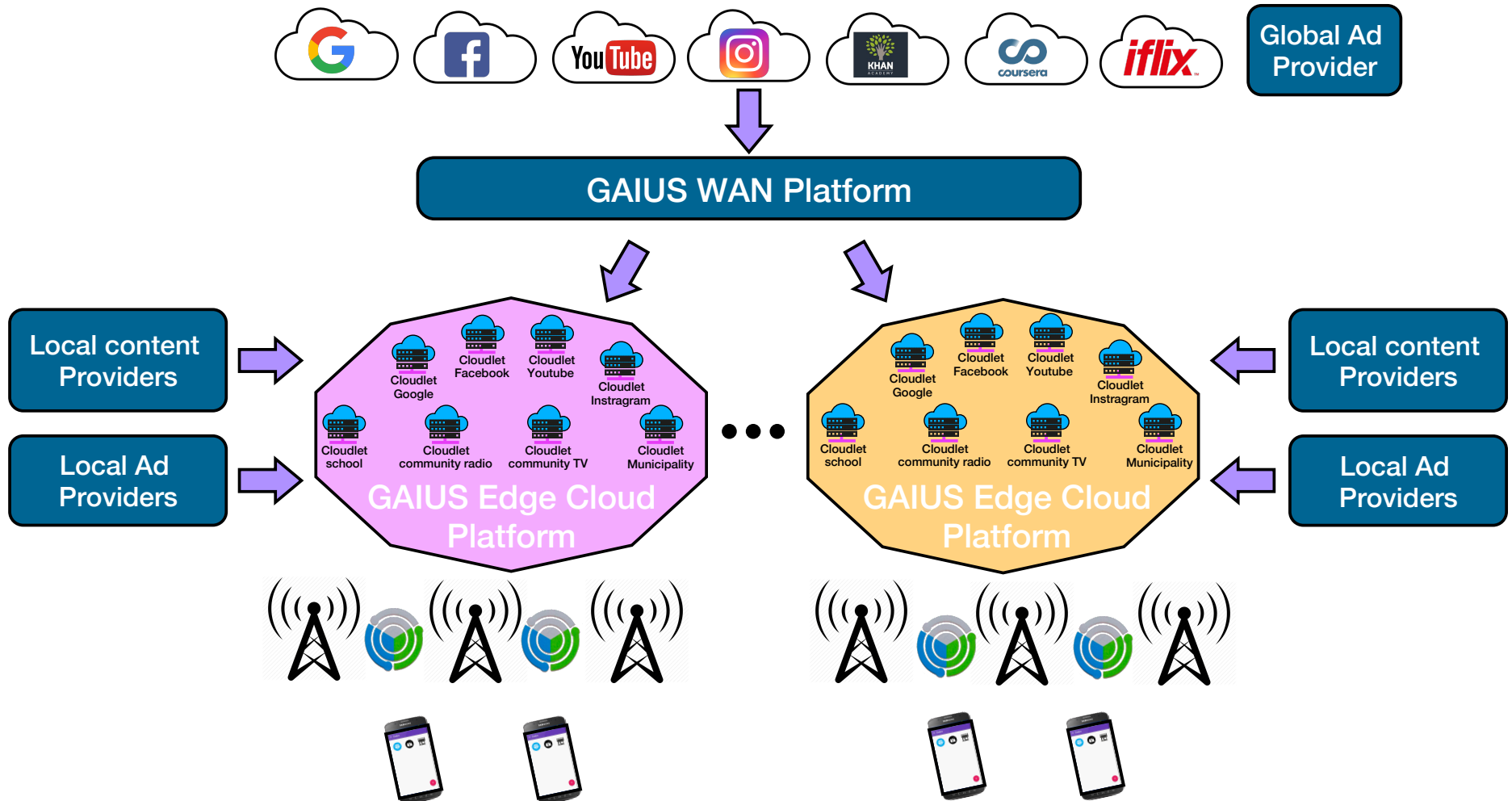
An edge content ecosystem

Cloudlet Google

Cloudlet Facebook

Cloudlet Youtube

Cloudlet Instragram

Cloudlet community radio

Cloudlet school

Cloudlet Municipality

GAIUS Edge Cloud Platform

Ad Server

Content Provider

Content is uploaded to the GAIUS Ecosystem

Content moves to the GAIUS Edge platform

GAIUS Ecosystem

Content is distributed to GAIUS clients

Content gets approved

App communicates with the local app server + relevant ads are served

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GAIUS App

Lightweight app designed for content consumption and creation

MAML

ALCC

TLS/SSL

TCP/IP

Built on top of the GAIUS framework

Use new application specification language (MAML)

New efficient transport delivery protocol (ALCC)

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8

Novel Mobile Specification Language (MAML)

MAML simplifies heavyweight and needlessly complex HTML pages

Ultra Lightweight

Flat structure

Eliminate recursive requests

Clients are sent a complete digest of a web page to optimise content for user experience

Example MAML pages

Example MAML pages presentation slide showing three webpage mockups: a news portal layout, and two versions of the National Institutes of Health (NIH) website.

MAML vs Opera Mini and Chrome
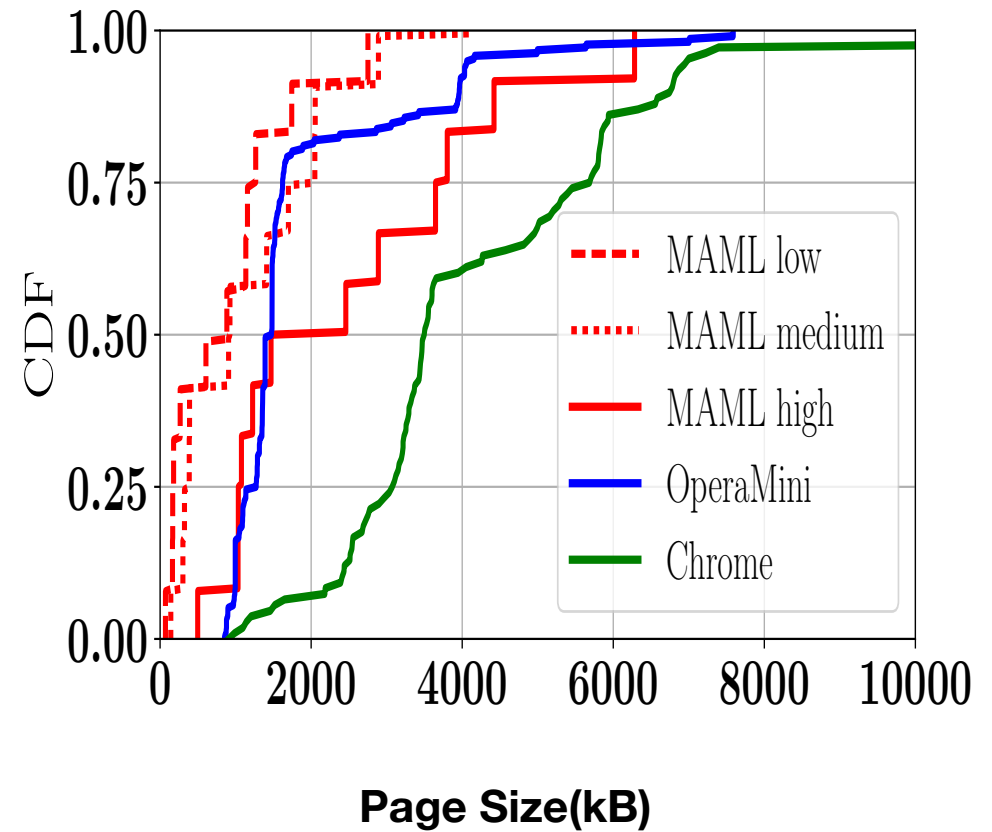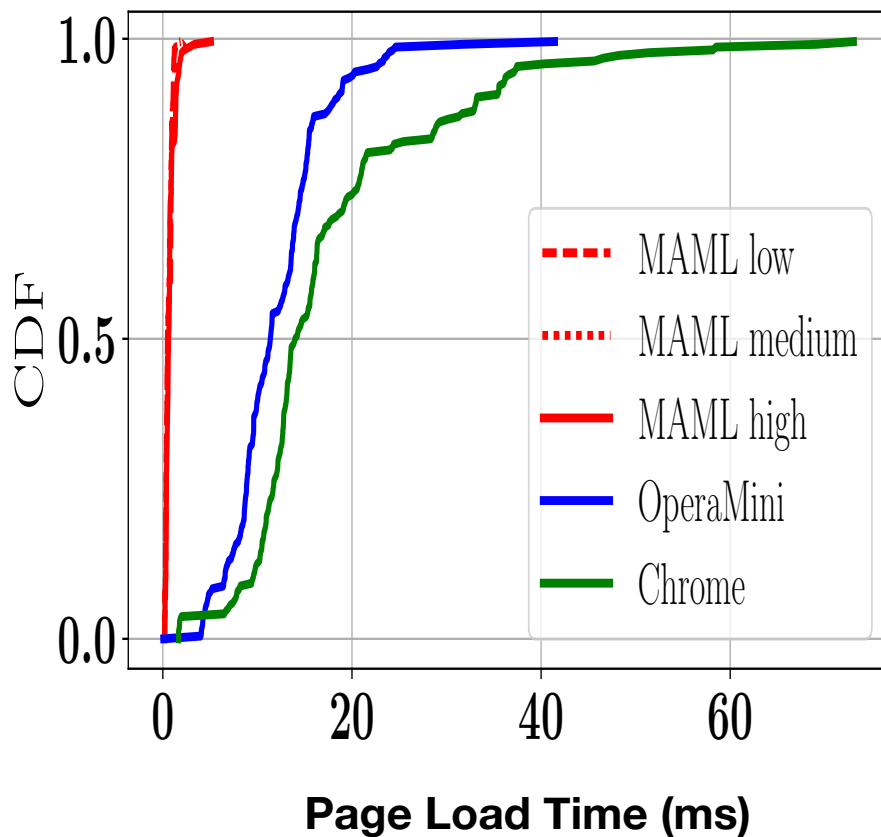
What do users think?
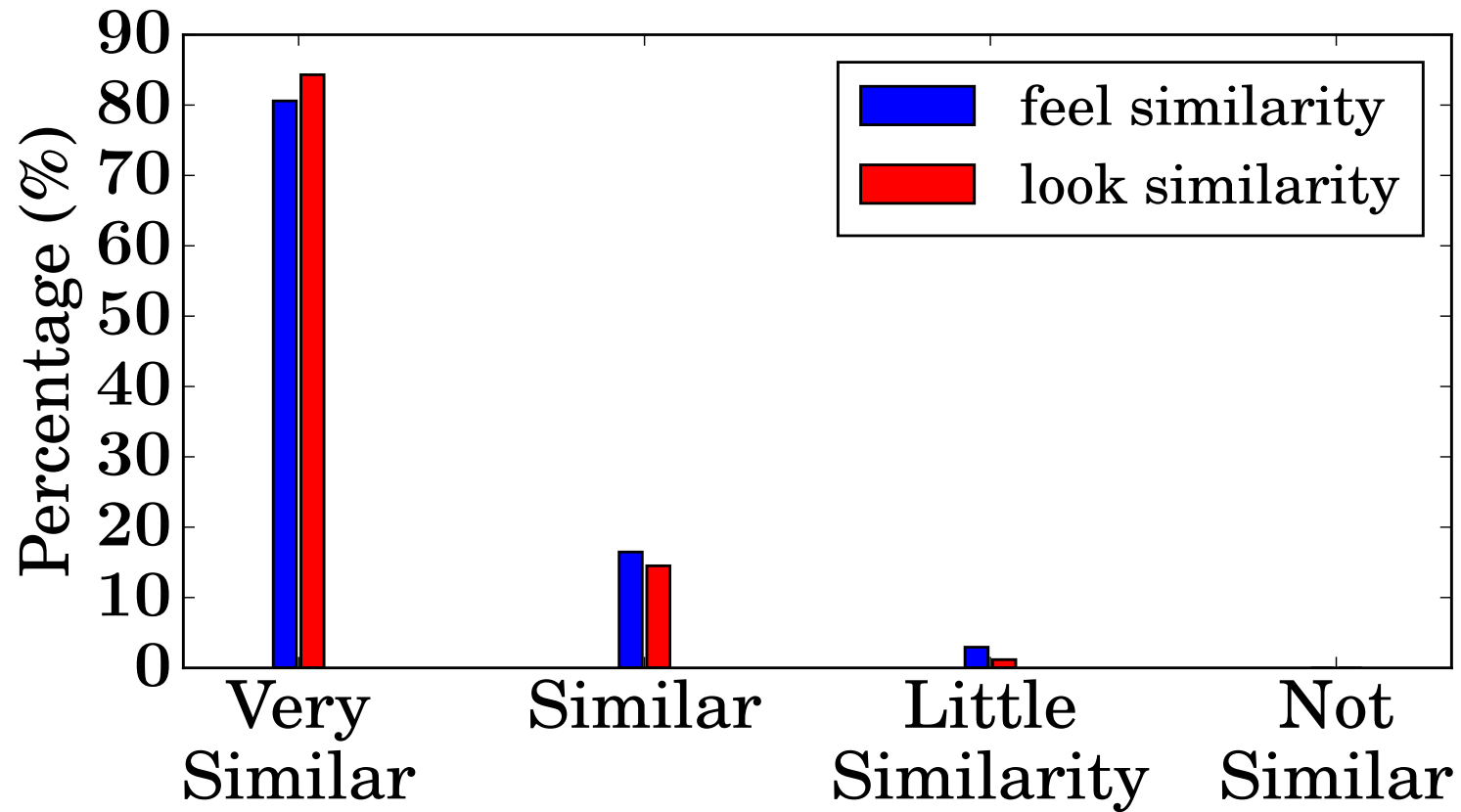
Lightweight Content-Ad Platform

Enabling a local content and ad exchange market place

Local and Global ad provisioning

Local storage of ads - bandwidth & energy savings for operator and users

Support for feature and smartphones: ad delivery through sms, calls and data

High Performance Mobile Stack

Efficient congestion control for cellular/wireless links
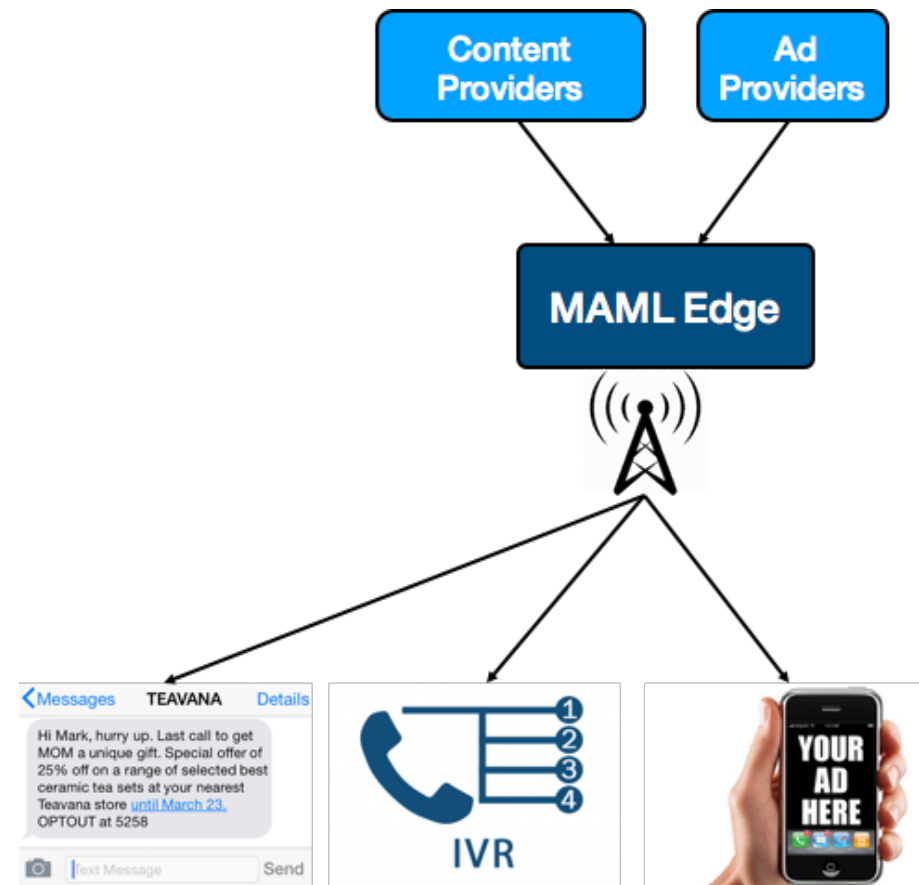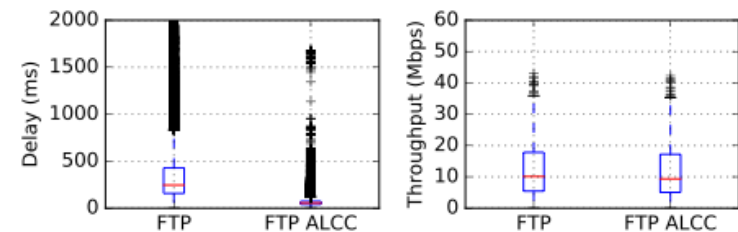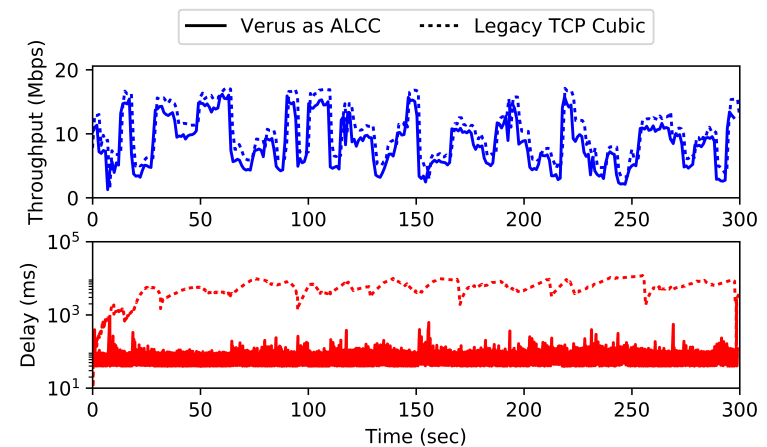
Upto 1/15 reduction in delay with the same overall throughput

Zero-byte protocol overhead

Extremely lightweight and easy to integrate to applications e.g. VR mobile gaming
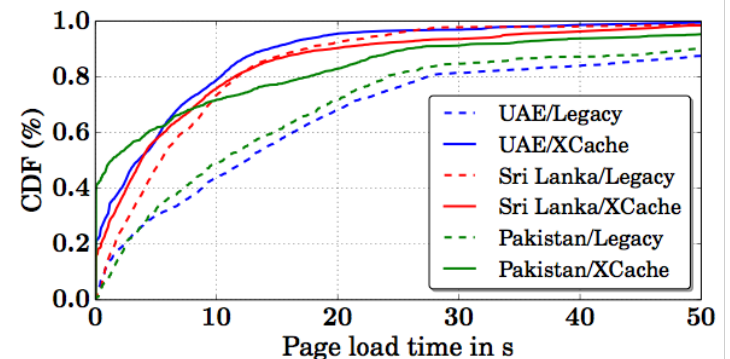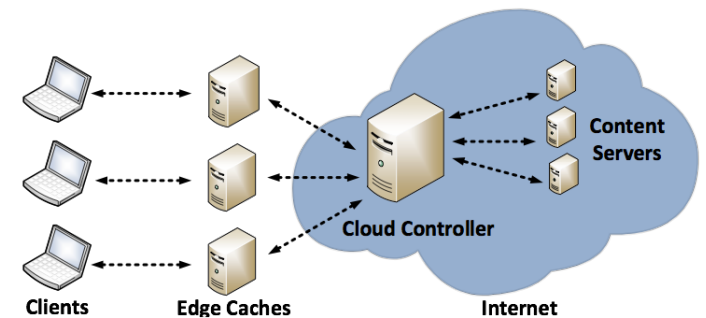
Optimised Content Diffusion

Novel solution for rapid & intelligent diffusion of content from cloud to edges

Enhance cache hit rate with minimal bandwidth overhead

Proactively profile popular pages

Maintains liveness of popular content

Thank you!

Questions?

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