AFRICAN ORAL SYSTEMS AND THEIR INFLUENCE ON MODERN INFORMATION TECHNOLOGY

LEVERAGING TRADITIONAL ORATURE TO BUILD INCLUSIVE VOICE USER INTERFACES

Defining the Culture: The Power of Orature

The Concept: African societies have historically been "Orality-First" cultures.

- Knowledge, history, and law were transmitted through the spoken word, not written text.
- Key Figures & Methods:
  - The Elder**:** The "Living Library" and custodian of history, genealogy, and community wisdom.
  - The Baraza: The community assembly where governance and consensus were achieved through dialogue.
  - The Transmission: Wisdom was passed down via proverbs, storytelling, and songs- formats that rely on memory and listening.
- **Core Value**: In this tradition, the "voice" is the primary instrument of truth, trust, and community connection.

The Conflict: The "Text Barrier" in Modern IT

The Problem: Modern technology (developed largely in the West) is "Literacy-First." It prioritizes:

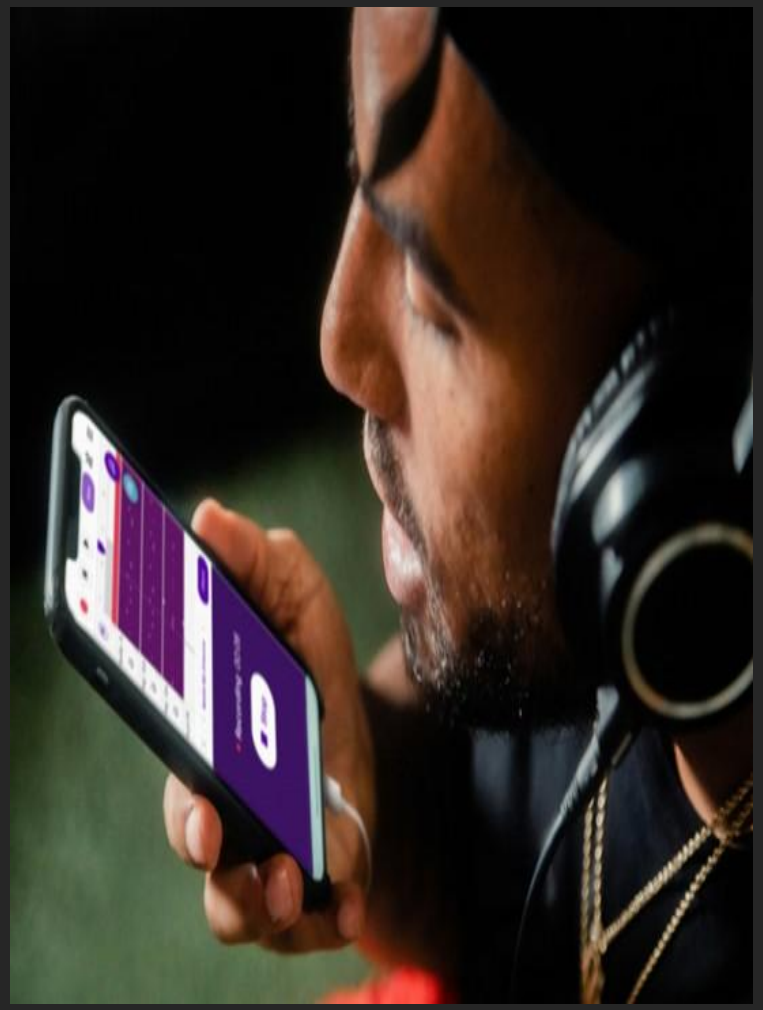
- Visual Inputs: Keyboards, screens, and text.
- Individualism: Solitary interaction with a device.

The Disconnect: This creates a "Digital Divide" in Africa, excluding:

- The elderly who are accustomed to oral communication.
- Populations with lower literacy in colonial languages (English/French).
- Visually impaired individuals who cannot access text-based interfaces.

The Result: A significant portion of the population is alienated from digital participation because the interface does not match their cultural mode of communication.

The Innovation: Voice User Interfaces (VUI)



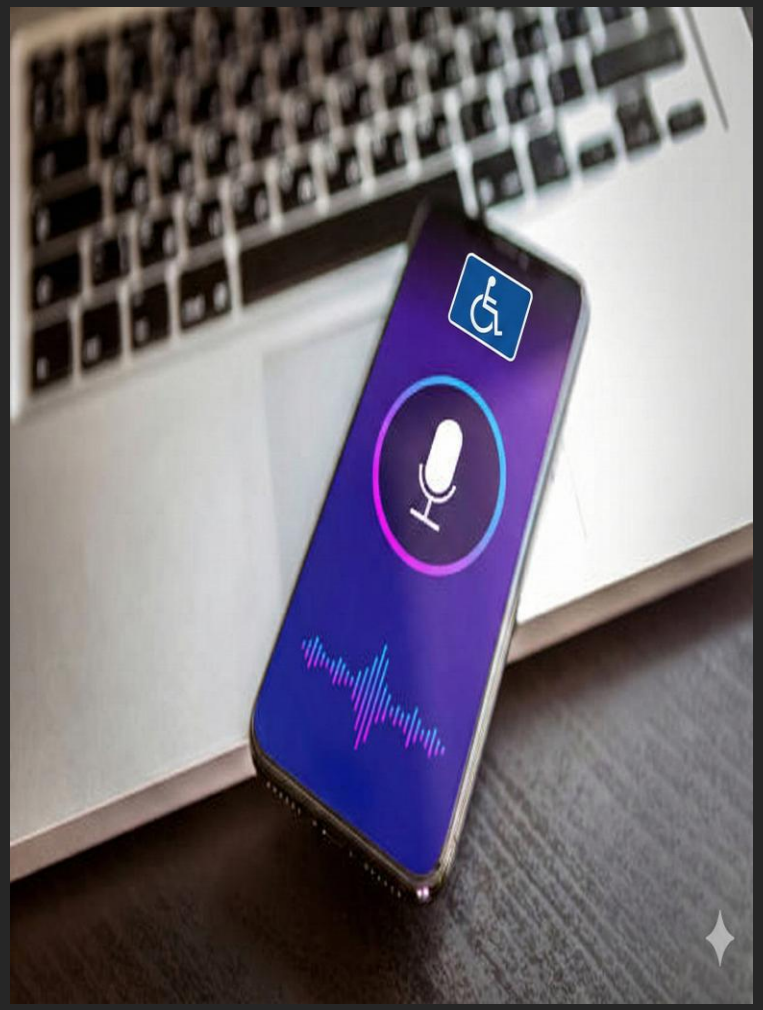
The Bridge: Voice Technology (VUI) acts as a bridge between traditional Orality and modern Computing.

How It Works:

- Natural Language Processing (NLP): Allows computers to understand human speech patterns.
- Speech-to-Text (STT) & Text-to-Speech (TTS): Converts digital data into spoken word and vice-versa.

The Shift: We are moving from "Computer Literacy" (teaching humans to speak machine code) to "Human Literacy" (teaching machines to speak human languages).

Practical Application: The Voice Voting Project



The Project: A mobile application designed to help visually impaired users vote using voice commands.

Cultural Alignment:

- Traditional Voting: Often involved physical tokens or verbal consensus in a village setting.
- Modern Digital Voting: Typically involves complex forms and touchscreens.
- The Solution: By using voice, the app mimics the Baraza—it allows the user to speak their choice and hear a confirmation, restoring dignity and independence.

Significance: This is not just "accessibility features"; it is culturally responsive design.

The Impact: "Ubuntu" in Software Design

Philosophy: Ubuntu - "I am because we are." A person is a person through other people.

Application in IT:

- Inclusivity: Technology must serve the whole community, not just the literate elite.
- Communal Access: Voice apps can be used in group settings or by those who cannot read, democratizing access to information.

The Outcome: When we design for the "ear" rather than the "eye," we align technology with the African value of communal participation.

Conclusion

Summary: Innovation in Africa does not mean abandoning our past. It means using new tools (AI/Code) to amplify old strengths (Orality/Community).

The Vision: The future of African technology lies in "Sankofa" (looking back to move forward)- building systems that listen and speak, just as our ancestors did.

Final Thought: "We are not just coding apps; we are digitizing the wisdom of the Griot."