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(71)**Name of Applicant :**
1)Chitkara University
Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ---------- ----------
2)Bluest Mettle Solutions Private Limited
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)MISHRA, Saket
Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ---------- ----------
2)PANDEY, Sakshi
Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ---------- ----------
3)SHARMA, Ishu
Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ---------- ----------

(57) Abstract :
The invention presents a robust system (100) for content-centric networking, harnessed through the Named Content Transport Protocol (NCTP). This inventive framework comprises a network of interconnected devices (102) that seamlessly facilitate content sharing and synchronization. The core of the system revolves around NCTP (106), a dynamic communication protocol at content-based routing, caching, and multicast-based content delivery. Complementing this, an integrated synchronization algorithm (108) ensures dependable and conflict-free synchronization of content across devices. A distinctive feature lies in the utilization of unique content names, generated via hash functions or similar mechanisms, for identifying data items slated for synchronization. With each data item's content name acting as a digital fingerprint, the system harmonizes device caching, content routing, and synchronization prowess, forging an innovative landscape of efficient content-centric networking.

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