Local Mean Time

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A line of clocks stretches across the space, appearing at first to tick in perfect unison. Look closer – or simply wait – and their unity begins to fray. Each clock keeps its own local mean time, calibrated to the exact astronomical position it occupies within the room. The tiny difference between adjacent clocks is almost imperceptible, yet when seen from a distance, they accumulate to form a subtle wave of digit changes that travels across the installation and seems to rush toward the viewer. This movement has no hidden author, it is the earth's rotation made visible, the sun's passage translated into computation. By reintroducing local time into a shared architectural space, the work unsettles the smooth uniformity of modern standardised time – the invisible global grid that coordinates transport, markets, and communication across time zones. It points to the social consequences of synchronisation: the way global time disciplines bodies, aligns lives with distant rhythms, and gradually erodes the sense of time as something locally situated, embedded in community and place.

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A Constellation in Time

Local Mean Time consists of an array of clocks, each calibrated not to the abstractions of modern standardised time, but to the specific astronomical condition of their own locations. The work explores how computation can make subtle spatial differences in time perceptible. It is about synchronisation and drift, about global standards and local variation, and about how algorithmic systems shape everyday experience.

The digital clocks that make up the installation are positioned along a straight line running East-West through the exhibition space (Fig. 1). At first glance, the clocks appear perfectly synchronised. Standing close to any individual unit, one perceives a familiar regularity: the digits flip at precise intervals, seemingly in lockstep with their neighbours. Yet this impression of unity is deceptive.

Fig. 1. *Local Mean Time* installation view. Photograph by Anton Paievski.

Each clock is tuned to the precise local mean time of the meridian on which it is physically positioned along that line. The algorithm governing the installation adjusts the display of each clock according to its longitude. Local mean time varies at a rate of four minutes per degree of longitude; translated into the scale of the gallery, these differences are small but exact. As a result, the clocks are never truly aligned. They share a common rule, but not a common time.

The installation operates at the threshold of temporal discrimination, staging micro-offsets that accumulate into pattern. A digit change arrives not as a single instant but as a traveling ripple moving from one end of the axis to the other. Small differences in their temporal offsets accumulate across the space. Only from a distance, a slight phase shift appears: a uniform tick becomes a rippling visual and auditory sequence. At regular intervals, the installation's stationary appearance is interrupted as a change propagates from one end to the other, forming a temporal wave that travels down the line before settling back into apparent synchrony.

Fig. 2. *Local Mean Time* video documentation: https://vimeo.com/916461010

There is no narrative and no intention behind this movement. The wave is a simple consequence of astronomical geometry translated into computation – the earth's rotation rendered visible along a straight architectural line. The gallery becomes a compressed model of longitude, its spatial extension mapped directly onto temporal variation.

Fig. 3. *Local Mean Time* installation view. Image credit: Anton Paievski.

Before the Grid of Time

Before the late nineteenth century, many towns kept their own solar times, determined by the moment the sun crossed the local meridian. Noon was a situated event rather than a global abstraction. With the expansion of railway networks and telegraphic communication, such variability became impractical. Standardised time zones imposed a rational grid across the earth, smoothing out local differences in favour of coordinated efficiency. Railway time did not merely coordinate trains, it reorganised perception, producing a new sense of simultaneity and temporal discipline (Schivelbusch 1986; Munn 1992). The temporal grid became infrastructural and largely invisible.

Rewriting the Measure of Time

Local Mean Time reintroduces the differences that standardisation suppresses while also unsettling the familiarity of temporal notation itself. Instead of using the familiar 12- or 24-hour clock to represent time of day, the installation adopts John W. Nystrom's *Tonal System* (Nystrom 1879). In this system, the day is divided into sixteen parts, each of these again into sixteen parts and so on, following a consistent base-16 logic rather than the familiar yet anachronistic base-12 and base-60 divisions preserved in modern timekeeping.

Retro-futuristic in appearance, it also recalls the failed decimal time reform of the French Republican Calendar (Zerubavel 1977; Dudzik 2024), another effort to reorganise time according to a single numerical logic. This alternative notation makes the constructed nature of timekeeping explicit. Viewers are confronted not only with temporal drift, but also with an unfamiliar metric that resists habitual reading.

Fig. 4. *Local Mean Time* installation view. Image credit: Anton Paievski.

A Field of Drift

The digital clock – so often associated with infrastructural modernity in stations, offices, airports, and trading floors – typically signals precision and uniformity. Here, that same device becomes a medium for exposing variation. The unfamiliar tonal numerals further distance the display from everyday expectation, slowing interpretation and encouraging attention to structure rather than habit.

Technically modest – microcontrollers, coordinate calculations, distributed autonomy – the installation demonstrates how simple computational rules can produce complex perceptual effects. The wave is not pre-animated, it emerges from the interaction of identical algorithms with differentiated positions in space. Astronomical fact and numerical reform combine to produce an aesthetic event.

Local Mean Time renders time as spatial, relational, and constructed. What first appears as uniform progression along a straight line reveals itself as a field structured by longitude, encoded in an alternative nu-

merical system. Beneath synchrony lies drift; beneath convention lies design. The work invites viewers to walk the line, to experience time as gradient, and to recognise that even the most stable temporal frameworks are products of choice.

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