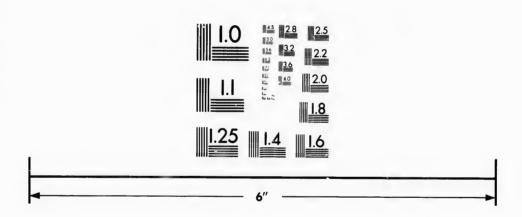


IMAGE EVALUATION TEST TARGET (MT-3)



Photographic Sciences Corporation

23 WEST MAIN STREET WEBSTER, N.Y. 14580 (716) 872-4503

STATE OF THE PARTY OF THE PARTY

CIHM/ICMH Microfiche Series. CIHM/ICMH Collection de microfiches.



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques



(C) 1987

Technical and Bibliographic Notes/Notes techniques et bibliographiques

| The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below. | | | | | L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous. | | | | | |
|---|--|---|-------------|--------------|--|--------------------------|-----|-----|-----|--|
| | ured covers/ erture de couleur | | | | Coloured Pages de | | | | | |
| | rs damaged/ erture endommag | ėe | | | Pages da Pages en | maged/ dommage | ėes | | | |
| | rs restored and/or erture restaurée e | | | | | stored and staurées e | | | | |
| 1 1 | r title missing/ re de couvertare । | manque | | | | coloured, colorées, | | | | |
| 1 1 | ured maps/ s géographiques (| en couleur | | | Pages de Pages dé | | | | | |
| 1 | | than blue or black outre que bleue ou i | ** | \checkmark | Showthre Transpare | • | | | | |
| | ured plates and/or hes et/ou illustra | | | | | f print va négale de | | ion | | |
| 1 - | d with other mate avec d'autres doc | | | | | suppleme d du mate | | | 'e | |
| La re | Tight binding may cause shadows or distortion along interior margin/ Lareliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure | | | | Only edition available/ Seule édition disponible Pages wholly or partially obscured by errata | | | | | |
| appe have II se lors o mais | Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ lise peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées. | | | | slips, tissues, etc., have been refilmed to ensure the best possible image/ Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible. | | | | | |
| | tional comments:, mentaires supplén | • | ephemera] (| 3] p. | | | | | | |
| Ce docum | ent est filmé au ta | duction ratio check nux de réduction inc | | | | 264 | | 20~ | | |
| 10X | 14X | 18X | T , | 22X | | 26X | TT | 30X | | |
| | 12X | 16X | 20X | | 24X | | 28X | | 32X | |

The to the

The poss of the film

Orig begi the sion othe first sion or ill

The shal TINI which

Map diffe entic begi right requ met The copy filmed here has been reproduced thanks to the generosity of:

Harold Campbell Vaughan Memorial Library Acadia University

tails

du odifier

une

mage

rrata to

pelure. n. à The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol → (meaning "CONTINUED"), or the symbol ▼ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:

L'exemplaire filmé fut reproduit grâce à la générosité de:

Harold Campbell Vaughan Memorial Library Acadia University

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole → signifie "A SUIVRE", le symbole ▼ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

| 1 | 2 | 3 | | 1 |
|---|---|---|-----|---|
| | | | | 2 |
| | | | | 3 |
| | 1 | 2 | 2 3 | |
| | 4 | 5 | 6 | |

**OPINIONS S⊷

OF

SOME OF THE LEADING PAPERS

ON THE

TWENTY-FOUR O'CLOCK SYSTEM.

It is stated that the C. P. R. authorities are contemplating the immediate introduction of the "twenty-four o'clock" system in the operation of their line. They cannot do so too quickly. The change in time marking indicated is certain to become universal in the near future. The civilized world is ripe for it. And our Canadian national road may as well appropriate to itself while it can the honor of leading the van of progress on this continent.

Nothing can be said in favor of the present "A.M." and "P.M." system except that it is. There are of course and always will be those who will believe that whatever is, is right. Luckily for the world, however, the great majority of mankind are of a ditterent way of thinking. Hence we have improvement and progress. Therefore we shall soon have a system of time marking more in accordance with the spirit of this busy and practical period, than the old, unscientific, and on the whole, in the light of modern advancement, rather absurd system which now obtains. This is an age of railways and telegraphs. That is, it is a time-economizing and accuracy-requiring age. It will certainly not, then, cling to an inherited system utterly at variance with it.

inherited system utterly at variance with it.

The only argument that can be advanced against the new system is that a change will involve temporary inconvenience. And what if it does? Did not the change from pounds, shillings and pence to the decimal currency cause great tribulation for the time being to those who were accustomed to the old methods of money reckoning? Yet who in this country having experienced the benefits of the new system, would return to the old? Time, proverbially is money. We should therefore count time as we do money, that is, as simply as possible. We should save time that we may thus save money. What is still more important, by the new system of time marking in connection with railways, that which is infinitely more important than moncy, would often be saved-human life.

The proposition to adopt the twenty-four hour system is by no means an impracticable or visionary one. Already it has been adopted by the foremost scientific institutions of the world. The Astronomer Royal of England introduced it on the 1st of January, 1885, at Greenwich, on the great central clock there. Public clocks have been adapted to it in London, at Liverpool and elsewhere in Britain. Not a few newspapers in the Old Country make all their announcements under the new system. Practically no cost will be involved in changing time-pieces at present in use so as to suit them to the requirements of the new system. This is an important consideration, as from a belief to the contrary is likely to arise any opposition to the introduction of the new system which may be anticipated. So far as the inconvenience of the thing is concerned a few days will enable the most obtuse to comprehend that thirteen o'clock is one P.M., as quickly as the point of time indicated by the present nomenclature is now compre-

In many European countries besides Britain the twenty-four hour system has been received with favor, notably in Russia. In Australia it is making rapid progress as indeed, judging from watchmaking advertisements it is making the world over. In this continent the feeling in favor of the new system is gaining ground with exceptional rapidity. America is always on the watch for anything promising. In the fall of 1884 a circular with regard to the new system was issued from New York, addressed to all the railway managers of America. In January following the result of that circular was set out as follows:—

"Replies have been received from 171 gentlemen, generally presidents, managers and superintendents, 98 per cent. of whom have individually expressed their sympathy with the movement, and stated that they will be prepared when it is ascertained that the feeling is general to abandon the old practice of dividing

The committee feel warranted in stating that the great telegraph interests of the conatry are in full sympathy. They have the authority of the President of the Western Union Telegraph Company for saying that the general adoption of the 24 o'clock system, besides reducing risk of errors, would save to that company the transmission of fally one hundred and fifty millions of letters annually.

Since the conclusions of the Washington Conference were made known in Europe only a few weeks back, the 24 o'clock system has attracted marked attention. On the first of the present month it was adopted at the Greenwich Observatory, the seat of control for all the public clocks of Great Britain.

In view of all the circumstances, it appears to the committee that the day is not far distant when a change may be successfully accomplished in this country. As in the matter of regulating time throughout North America by hour standards, it is believed that the proposed change can best be effected by the railway authorities. The committee therefore recommend that steps be taken to bring all the information referred to in this report, and the whole question, before the next meeting of the Railway General Time Conventions.

In Canada, owing in no small degree to the strenuous efforts of Mr. Sanford Fleming, the new system is even further advanced in public favor than in the United States. We clip the following from the Mail of a recent date:—

The secretary of the Canadian Institute has summoned the members to meet to-day at twenty o'clock. Thus another step has been taken towards the general adoption of the twenty-four o'clock system of time-reckoning. The application of the twenty-four o'clock system to local time is one step on the road, and the Canadian Institute is pioneering the schene in Canada. It is understood that some British scientific societies have already adopted it.

We hope that the C. P. R. will at once take steps to secure for itself the honor of being the first railway in the world to adopt a time system upon which in a few years not only will all roads be operated, but which will inevitably be universal.

Manitoba Free Press, December 28, 1885.

Speaking with General Superintendent Egan on the proposed introduction of the twenty-four o'clock system into the working of the Canadian Pacific Railway, a representative of THE MANITOBAN was informed that not only was it the Canadian Pacific Railway which would adopt it, but the most influential of the railroad men in the United States were in favor of it, and he expected to see it at no late date as universally used on this continent as is standard time. If the railroads adopted the system he thought the rest of the country would follow as a matter of course.

The American Society of Civil Engineers, who are the prime movers in the matter of time reform, have published a pamphlet dealing with the twenty-four o'clock system, from which the following extracts are made:

D. J. Whittemore, president of the society, speaking at the Buffalo convention, said: Among the important subjects legitimately under consideration by our society at the present time is that of reckoning and denoting time. It is not surprising that members of our profession should have been the first to suggest practicable reforms in this direction, and it is a gratifying fact in the history of our society, that the energetic support you have given to the establishment of standard meridians of time has contributed, probably, more than any other cause to the adoption of this reform over a large portion of this continent.

. . . . Hence it is not strange that the members of our profession, with great unanimity, favor the numbering of the hours consecutively throughout the entire day, instead of dividing each day into halves of twelve hours each. We are fully aware that we contend with the prejudice of custom in our attempts in this direction. That great agent of modern civilization, the railway, rendered the adoption of standard time possible. Now, if that great agency in public education, the press, will adopt the proposed reform in its and of daily hours, it is believed that antered past meridian time will soon be relegated to the past,"

Mr. Sandford Fleming, in his report to the Buffalo convention, made as chairman of the special committee on standard time, says that in response to the invitation given to prominent men to give an emphatic expression of opinion upon the twenty-four o'clock system, 92 per cent, gave their unqualified support to the proposal to adopt a single series of hours from

MIDNIGHT TO MIDNIGHT,

numbered from one to twenty-four. Further on Mr. Fleming says: "It is proposed to

adapt clocks and watches now in use to the change by having inscribed on the existing dials the new numbers of the afternoon hours 13 to 24 inclusive. The only practical difficulty to be overcome is met by the simple expedient of placing on the face of the watch or clock a supplementary dial showing the new afternoon hours in Arabic numerals within the present Roman figures. It has been found that by using the supplementary dial (which must necessarily be thin) made simply with paper and secured to its position by any gum which will adhere to the enamelled surface, the object is attained without any further alteration of the watch or clock. It is thus evident that every person in the community may at the cost of a few cents in each case, adopt his watch to the 24 o'clock

an

y-

he

of

ılv

ch

of

in

ite

is

he

ry

rs.

of

al-

m

d:

elv

he

ng

ur

est

is

ty.

10

of

an

rm

he

ın-

11-

υſ

irs

nd

ots

m

on

eat

ill

of

ast

he

he

.he

nat

ent

on

er he om

ier to system. Mr. Fleming points ont the inconveniences arising from the present system of dividing the day into halves, which, as they have been looked upon as unavoidable, have been philosophically and silently endured. "Is there in fact," he asks, "one person who at some time or other has not been baffled in his efforts to solve the intricacies of railway time tables, who cannot refer to frequent mistakes springing directly from this cause? Occasionally we find railway time tables unintelligible to many people, and exceedingly troublesome to all who have occasion to consult them, owing to the distinction made between the twelve hours before and the twelve hours after noon. He contends that the present system is an impediment to general intercourse, and as such should be removed, however venerable it may be. In conclusion, Mr. Fleming says; "It will take some time to accustom ourselves to the new numbers of the afternoon hours. The man who usually leaves off work at 6 o'clock, p.m., might consider he had a ground of complaint when asked to continue until 18 o'clock. A lady inviting her friends to afternoon tea at 5 o'clock, would at first excite amusement by inviting them to tea at 17 o'clock; but the change once established, and its advantages realized, the mind would soon become familiar with the navel expressions, and in a brief space of time the new sounds would become familiar to the ear."

Daily Manitohan, December 30, 1885.

The Canadian Pacific authorities contemplate the immediate introduction of the twenty-four o'clock system, it is said. This will do away with the "a. m." and "p. m." system with all its absurdities,

The proposed change will be a move in the right direction. The system must inevitably become universal. A look at the modern railway time table forcibly reminds one of the two bewildered English colliers trying to discover the starting time of trains from their village to Bolton. "Eleven forty p. m." said one of them, glaring at the time table sheet. "Wot's p. m. Bill?" "Penny a mile," was the curt reply of his companion. "An' wot's a. m., Bill?" was the second query. "Wy 'ape'ny a mile, Jack. Didna know as ye be as ignorant as ye be?" was the complimentary rejoinder.

The next change in regard to railway time tables will be the abolition of the familiar "a.m." and "p.m." and the numbering of the hours consecutively from one to twentyfour. A committee appointed by the American Society of Civil Engineers, to learn the views of the railroad officials of the continent on the subject, have received replies favorable to the system from representatives of over 100,000 miles of line, including the great Canadian roads, the Grand Trunk, Canadian Pacific and Intercolonial. The telegraph corporations also desire the change, which would obviate many opportunities for mistakes. The readmess with which the public acquiesced in the action of the railroads in fixing hour standards throughout the continent will, doubtless, encourage them in earrying out the second half of the reform; indeed some managers have all but decided on immediately adopting it, so that we may soon see at least a partial abandonment of the present system for the new one. It is to be noted that while the adoption of district time was largely due to the suggestion of Mr. Sandford Fleming, the movement for the present proposed change originated in Toronto. Both are, therefore, due to Canadian initiative. The meteorological service of the Dominion has used the new system for some time.

Montreal Gazette, Jan. 11, 1886.

