

DEVELOPING NEW USE OF RADIO

Pulse Time Modulation Spits
Out Program Twelve
At a Time

By C. E. BUTTERFIELD

NEW YORK, Nov. 9 (AP)—
Something else is being added to
radio: pulse time modulation.

Like amplitude modulation, as
used in standard broadcasting,
and FM (frequency modulation),
it is a system of transmission
phone, broadcast and other serv-
ices that can be applied to the radio-
uses.

Its prime objective is multi-
plexing—that is, the use of a
single transmitter to handle
more than one telephone conver-
sation or broadcast program si-
multaneously. Or it might even
enable consolidation of the sepa-
rate sound and sight transmit-

ters of television into a single
unit.

In process of development for
nine years, pulse time, or PTM,
is just becoming practical. It is
particularly adaptable to very
high frequencies. A recent test
on an 80-mile radiophone circuit
employed 1350 megacycles. This
is the micro-ray band.

For the test, a triangular cir-
cuit consisted of two repeater
stations, besides the main trans-
mitter, to send signal from New
York to Nutley, N.J., and back.
Engineers explained that it could
carry 24 or more two-way tele-
phone conversations, numerous
telegrams or 12 or more differ-
ent broadcast programs without
getting any mixed up. Parabolic
reflectors comprised the beam
antenna apparatus.

The system, brainchild of E.
M. Deloraine, E. Labin and oth-
ers of the Federal Telecommuni-
cation laboratories of the Inter-
national Telephone and Tele-
graph Corp., gets its name, pulse
time, from the way it functions.
Entirely electronic, it is a tre-
mendous advancement over the
earlier mechanical multiplex
methods employed in telegraphy.

Chops Up Programs

Pulse time, in effect, chops two
or more conversations or pro-
grams, fed into the transmitter,
into bits—short bursts or pulses
—and precisely spaces them out
in time sequence at extremely
high speed so that they travel
as a single radio wave.

These pulses are but one-half
millionth of a second long. At
the receiver they are put back,
unscrambled, into their proper
order. The result has been de-
scribed as an interweaving in
time of one group of signals with
another.

Technically, PTM is achieved
by modulation or variation, of
the time interval between pulses.
Compared with amplitude modu-
lation of standard broadcasting,
which varies or modulates the
strength or amplitude of the
wave, and with FM, which de-
pends upon the rapidity of vi-
bration or frequency of the
wave, PTM modulation remains
constant in both amplitude and
frequency.

Heart of the system is a special
foot-long vacuum tube, the "cy-
clopion," used in both transmit-

FORD STRIKE IS DISCUSSED

One of Principal Items at
Trades and Labor Council
Meeting

Discussion of developments at
the Ford Motor Co. strike in
Windsor highlighted last eve-
ning's regular monthly meeting
of the Prince Rupert Trades and
Labor Council. As a result, it
was arranged that the execu-
tive should meet with the execu-
tive of the Prince Rupert Labor
Council (CCL) and the execu-
tives of all affiliated unions of
both councils to decide on what
action should be taken in sup-
port of the Windsor strikers. The
executive meeting is to be held
this evening in the Metropole
Hall.

A communication was received
from the secretary of the Prince
Rupert Teachers' Association
giving notice of Education Week
being held from November 11 to
17 and requesting permission for
a speaker to address the council.
The request of the association
was granted and the secretary is
to be notified accordingly.

A convention call was received
from the secretary of the provin-
cial executive of the Trades
and Labor Congress stating that
the provincial executive would
convene in Vancouver on No-
vember 22. They are to remain
in session until the business of
the convention is completed. Due
to two delegates from here go-
ing to the provincial Council of
Carpenters' convention which
convenes in Vancouver on No-
vember 28, it may be found im-
possible to send delegates to both
conventions owing to the spread
in dates between the two, which
would necessitate considerable
lost time and added expense.

A letter was received from L.
K. Gervin, secretary, Vancouver
and New Westminster Trades
and Labor Council, soliciting the
support of the council in the
former's crusade for the "forty-
hour week with no reduction in
pay." This was unanimously en-
dorsed. It was also pointed out
that the Vancouver city council

ter and receiver. It functions
as a high speed relay or switch
to keep each group of signals in
their proper place.

Engineers claim for the system
a considerable reduction of sta-
tic, crosstalk and other noises
in reception, due primarily to its
time pulse character.

While the first phone test was
over a comparatively short dis-
tance, other trials are planned
between New York and Wash-
ington, with a multiplex broad-
cast test projected for next year.
Demonstrations of its use in
color television, it was stated,
awaits further refinements in
color broadcasting.

INGWALL, Scotland — Ding-
wall boys take to "the pipes" so
well that school authorities are
trying to arrange bagpiping as a
subject in the schools.

ANCIENT CHEWING GUM
Centuries before the arrival of
Columbus, the Mayan people of
Guatemala liked to chew chicle,
the hardened sap of the sapo-
dilla tree.

Circulation figures of daily
newspapers in Canada are audit-
ed by an independent body of
advertisers, agencies and pub-
lishers—the Audit Bureau of
Circulations.



THEY CAN LAUGH IN HONG KONG—NOW—For nearly four years the British colony of Hong Kong was in the hands of the Japanese and the heavy shadow of the Nipponese military machine cast a pall of gloom on the island. Now Hong Kong is liberated and the natives are laughing again. Admiral Sir Bruce Fraser and a matron, are jesting with some of the Chinese girls of the Tai Po orphanage.

has already given its endorsement
to this move.

A communication was received
from E. V. Whiting, local Selec-
tive Service officer, requesting
the appointment of a member
to the local employment advis-
ory committee. President August
Wallin was the unanimous
choice for this appointment.

A letter was received from the
Norwegian charge d'affaires at
Montreal in appreciation of the
council's efforts in striving to
have regular parcel post rates
restored to Norway.

P. S. Faranger of the United
Fishermen's and Allied Workers'
Union reported that his union
had set up a Ford strike com-
mittee and had already collected
\$150 to assist the strikers and
their dependents.

J. Mulroney reported that the
committee appointed to "pep
up" the Waitresses' Union was
meeting with success.

Better English By D. C. WILLIAMS

1. What is wrong with this sentence? "He is in a bad fix."
2. What is the correct pronun-
ciation of "illusive"?
3. Which one of these words
is misspelled? Agricultural, ag-
gregate, agnosticism.
4. What does the word "untu-
tored" mean?
5. What is a word beginning
with hi that means "boisterous
mirth"?

Answers

1. Say, "He is in a bad condi-
tion." 2. Pronounce i-lu-sive,
both i's as in it, u as in unit, s
as in so (not as z), accent sec-
ond syllable. 3. Aggregate. 4.

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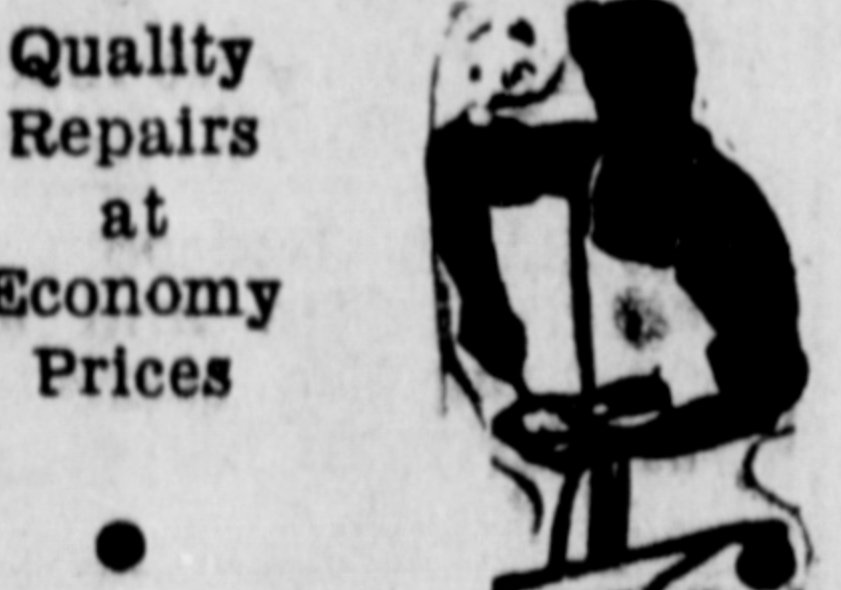


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