

Wagner de Souza Tavares *

Phonecard-operated payphones in buses in Brazil

*

Wagner de Souza Tavares is BSc in Agronomy, MSc and PhD in Plant Science. Currently works as a Senior Entomologist for APRIL-RAPP, Indonesia. Fusilatelist for around 22 years. Curator of a large collection of phonecards and other items.

<wagnermaias@yahoo.com.br >

ORCID 0000-0002-8394-6808

Abstract Payphones were installed in public buses in Brazil. These payphones worked with same phonecards used in tradicional payphones or with specific phonecards produced by telecommunication companies in collaboration with bus transport companies. The objectives of this study were to identify the buses installed with payphones in Brazil, chronology, payphone system, and phonecard type (whether tradicional or specific). The specific phonecards were described. A mobile phone-type payphone working with tradicional phonecards, developed by Telecomunicações da Paraíba S.A. (TELPA; João Pessoa, Paraíba State, Brazil) and installed in 1994 on Rogetur Transporte e Turismo Ltda. transport company buses, is the first consolidate case of a payphone used in a bus in Brazil. Specific phonecards developed by Globalstar, Inc. (Covington, Louisiana, United States of America) in 2000 were used in payphones installed on Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A. transport company buses.

Keywords Art in phonecards, Bus, Globalstar, Inc., Public transport, Transport company.

Telefones públicos operados com cartão telefônico em ônibus no Brasil

Resumo Telefones públicos foram instalados em ônibus públicos no Brasil. Esses telefones funcionavam com os mesmos cartões telefônicos usados em telefones públicos tradicionais ou com cartões telefônicos específicos produzidos por empresas de telecomunicações em colaboração com empresas de transporte de ônibus. Os objetivos deste estudo foram identificar os ônibus instalados com telefones públicos no Brasil, cronologia, sistema de telefones públicos e tipo de cartão telefônico (tradicional ou específico). Os cartões telefônicos específicos foram descritos. Telefone público do tipo telefone móvel com cartões telefônicos tradicionais, desenvolvido pela Telecomunicações da Paraíba S.A. (TELPA; João Pessoa, Paraíba, Brasil) e instalado em 1994 em ônibus da empresa de transporte Rogetur Transporte e Turismo Ltda., é o primeiro caso consolidado de um telefone público utilizado em um ônibus no Brasil. Cartões telefônicos específicos desenvolvidos pela Globalstar, Inc. (Covington, Louisiana, Estados Unidos da América) em 2000 foram usados em telefones públicos instalados nos ônibus das empresas de transporte Viação Itapemirim S.A. e Empresa de Ônibus Nossa Senhora da Penha S.A.

Palavras chave Arte em cartões telefônicos, Empresa de transporte, Globalstar, Inc., Ônibus, Transporte público.

Teléfonos públicos operados con tarjeta telefónica en autobuses en Brasil

Resumen Se instalaron teléfonos públicos en autobuses públicos en Brasil. Estos teléfonos funcionaban con las mismas tarjetas telefónicas que se utilizan en los teléfonos públicos tradicionales o con tarjetas telefónicas específicas producidas por empresas de telecomunicaciones en colaboración con empresas de transporte por autobús. Los objetivos de este estudio fueron identificar los buses instalados con teléfonos públicos en Brasil, cronología, sistema telefónico público y tipo de tarjeta telefónica (tradicional o específica). Se han descrito tarjetas telefónicas específicas. Teléfono público tipo teléfono móvil con tarjetas telefónicas tradicionales, desarrollado por Telecomunicações da Paraíba S.A. (TELPA; João Pessoa, Paraíba, Brasil) e instalado en 1994 en autobuses pertenecientes a la empresa de transporte Rogetur Transporte e Turismo Ltda., es el primer caso consolidado de un teléfono público utilizado en un autobús en Brasil. Las tarjetas telefónicas específicas desarrolladas por Globalstar, Inc. (Covington, Luisiana, Estados Unidos de América) en 2000 fueron utilizadas en teléfonos públicos instalados en autobuses operados por las empresas de transporte Viação Itapemirim S.A. y Empresa de Ônibus Nossa Senhora da Penha S.A.

Palabras clave Arte de tarjetas telefónicas, Autobús, Empresa de transporte, Globalstar, Inc., Transporte público.

Introduction

Phonocards are items collected as a hobby by several people around the world (TAVARES, SILITONGA, 2021a; TAVARES, 2021). Installation of payphones on buses in Brazil was made to benefit passengers, and as a consequence of the reduction in the use of traditional payphones, high maintenance cost, technology stagnation, in addition to competition between public transport companies. The number of traditional payphones started to decrease drastically in 2007, while that of mobile phone lines increased to reach about 255 million active lines in Brazil in 2013 (BAZANI, 2013).

The telecommunication companies Oi S.A. (Rio de Janeiro State, Brazil) and Telefônica Brasil S.A. (São Paulo State, Brazil) had monthly gains of US\$1.95 and US\$2.74 per payphone in 2013, respectively while their historical gain an average of US\$21.50 per payphone (currency conversion from Brazilian real to American dollar was carried out on 17 July 2021). A total of 49% of payphones in Brazil had made less than two calls per month or a maximum of two per day. This resulted in the suggestion to drop the number of payphones from 950 thousand to 538 thousand in Brazil in 2013 (BAZANI, 2013).

The National Telecommunications Agency “Agência Nacional de Telecomunicações” (Anatel; Brasília, Federal District, Brazil) proposed new options and technological solutions to benefit passengers, including the installation of payphones on urban buses. The payphone system proposed by Anatel would be used in large Brazilian towns in 2013 afterwards, especially those hosting the 2014 World Cup and 2016 Olympics (BAZANI, 2013).

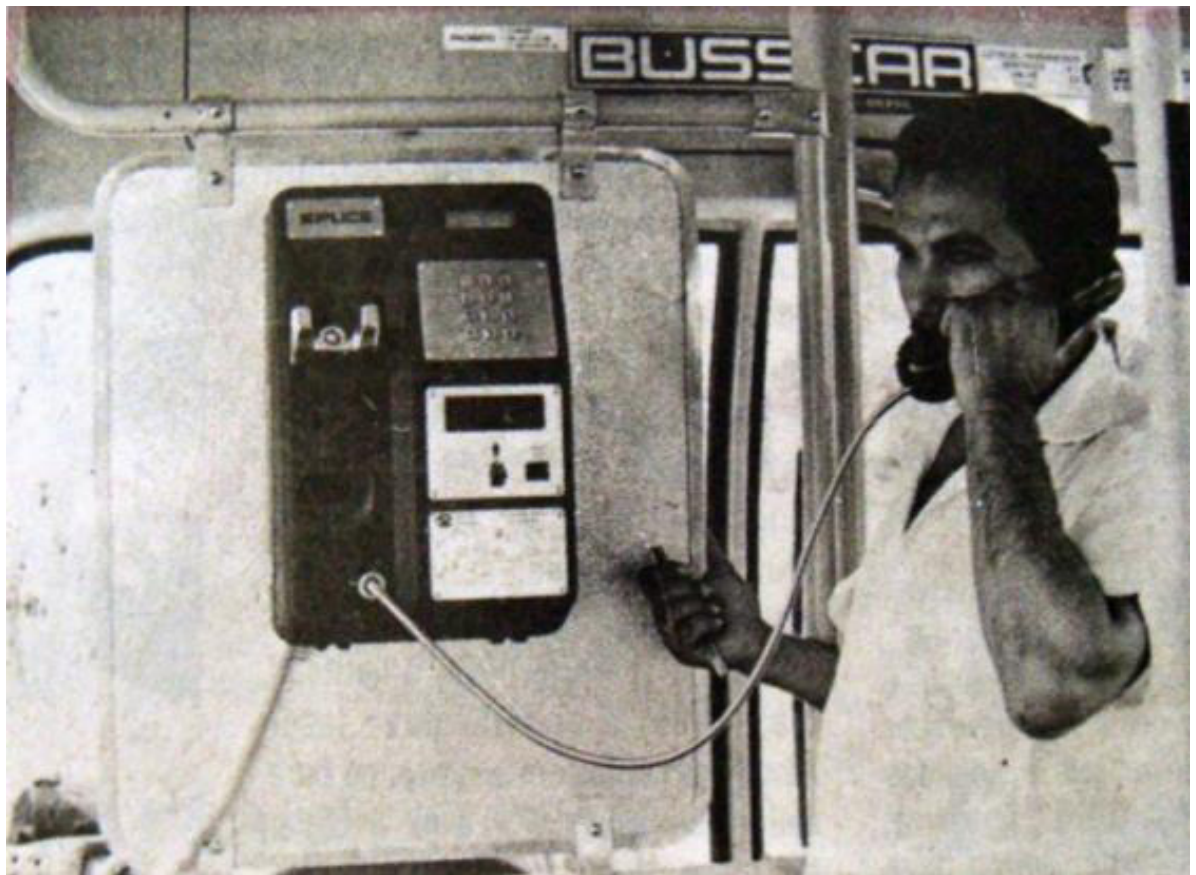
The telecommunication company Brasil Telecom S.A. (Brasília, Federal District, Brazil) had tested the Mobile Community Telephone (TCM or Telo) system, of payphones on Companhia Carris Porto-Alegrense (Carris) transport company buses in Porto Alegre, Rio Grande do Sul State, Brazil in 2008. The Telo system was consisted of mobile networks connected to the Global Positioning System (GPS) devices of buses (BAZANI, 2013).

Payphones on Rogetur Transporte e Turismo Ltda. transport company buses

The bus line 5115-Cabedelo town, of the transport company Rogetur Transporte e Turismo Ltda. (João Pessoa, Paraíba State, Brazil), initiated the use as an experimental trial for 40 days of the first mobile phone-type payphone using the traditional inductive phonocards in the North and Northeast regions of Brazil in April 1994 (Figures 1A-1B). This trial was carried out by the telecommunications company Telecomunicações da Paraíba S.A. (TELPA; João Pessoa, Paraíba State, Brazil) as part of a study to identify a payphone system to be implemented further to other bus companies in Paraíba State (ÔNIBUS URBANOS, 2015).



A



B

Fig 1. A Rogetur Transporte e Turismo Ltda. transport company bus (A) and its mobile phone-type payphone (B), line 5115-Cabedelo town, in Paraíba State, Brazil using the traditional inductive phonecards in April 1994

Source: Roger Company Collection and Paraíba Bus Team Historical Collection, respectively, 1994

The bus had a 1990 Busscar Urbanus body (Busscar Ônibus S.A.; Joinvile, Santa Catarina State, Brazil) and a Mercedes-Benz O 371 chassis (Mercedes-Benz; Stuttgart, Baden-Württemberg, Germany) (VIANA, 2011). This bus made passenger transport between João Pessoa and Cabedelo towns, and installed with a mobile phone-type payphone as the route is flat, road was preserved and without frequency wave interference from irregular terrains. The payphone was connected to a 12 volts battery, and an external antenna fixed to the bus body for wave transmissions. The time spent from João Pessoa to Cabedelo town by bus was around 50 minutes with stops in Jacaré, Poço and Camboinha regions. The price per call was similar from that of conventional payphones (ÔNIBUS URBANOS, 2015).

In Brazil, only Curitiba town (Rio Grande do Sul State) had buses with mobile phone-type payphones available in 1994. As operating costs were four times higher than those of conventional payphones and demand was low, TELPA deactivated the system after the experimental period (ÔNIBUS URBANOS, 2015).

Payphones on Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A. transport company buses

A telephone system using payphones was installed on some buses of Viação Itapemirim S.A. (São Paulo State, Brazil) and Empresa de Ônibus Nossa Senhora da Penha S.A. (Curitiba, Rio Grande do Sul State, Brazil). This installation began on 1st December 2000 and benefited passengers traveling between Porto Alegre, Rio de Janeiro, São Paulo, Belo Horizonte, Brasília, and Vitória regions. The telephone system via satellite from Globalstar, Inc. (Covington, Louisiana, United States of America) was used (RIPARDO, 2000).

A total of 43 busses from Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A., models Golden and Classis, respectively, were installed with payphones, in a first trial phase. After this trial, the service was offered to a higher number of bus transport companies with lines covering other towns (RIPARDO, 2000).

Specific phonecards from Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A. transport company buses

Specific smart card-type phonecards with a chip, manufactured by Daruma Telecomunicações e Informática S.A. (São Paulo State, Brazil), were used. These cards were available for purchases at the counters of transport

companies. Passengers would be able to make domestic and international calls. The cards were of one, three and five minutes with prices of 0.49, 1.27 and US\$1.88, respectively (currency conversion from Brazilian real to American dollar was carried out on 17 July 2021) (RIPARDO, 2000).

The use of phonocards in these buses improved travel quality to passengers. The payphone was located at the back of the bus and had a display allowing the passenger to control the time spent on each call. In addition, the driver had a device in the bus cabin allowing permanent contact with the main office (RIPARDO, 2000).

Payphone with mobile phone technology on buses

A



The installation of the Telo system began in March 2007 on buses of the T1 and T1 Direita lines and began on 19 April 2007 on T5 line buses with prefixes 171, 180 and 317. Calls were free during the experimental period and charged from April 2007. The price per minute was US\$0.12 to landlines and US\$0.18 to mobile phones (currency conversion from Brazilian real to American dollar was carried out on 17 July 2021) (PREFEITURA MUNICIPAL DE PORTO ALEGRE, 2007).

A total of 350 public telephones were installed on 336 Carris buses up to October 2008 with only one of the buses being a tourist bus (Figures 2A-2B). The Telo system used the GSM technology being same as those chip mobile phones, but it worked with the traditional payphone phonocards (OPANTANEIRO, 2008).



B

Fig 2. Inserting the traditional phonocard (A) and dialing a mobile phone-type payphone (B) on a Companhia Carris Porto-Alegrense bus

Source: Sofanoteto, 2008

The Telo payphone functioned as a tradicional payphone, with some physical differences. The Telo was smaller and without edges, fixed to the vertical bars of the buses and could be rotated around its axis, allowing its use by standing and seated passengers. The payphone had also a tracking system, through which public transport companies could track their fleet. The Telo was developed and patented by Público Veicular Inovações (PV Inova) of the business incubator at the Genesis Institute of Pontifical Catholic University of Rio de Janeiro (PUC-Rio), in Rio de Janeiro, Brazil (SOFANOTETO, 2008; TELESÍNTESE, 2008).

Collecting bus phonecards as a hobby

The study was carried out in an office where a collection of phonecards and other collectible items is kept in Pangkalan Kerinci, Riau, Indonesia (0°20' N × 101°51' E). The specific phonecards used in payphones of Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A. buses were obtained for their description. The front and back of each card was scanned (Figures 3A-3L).

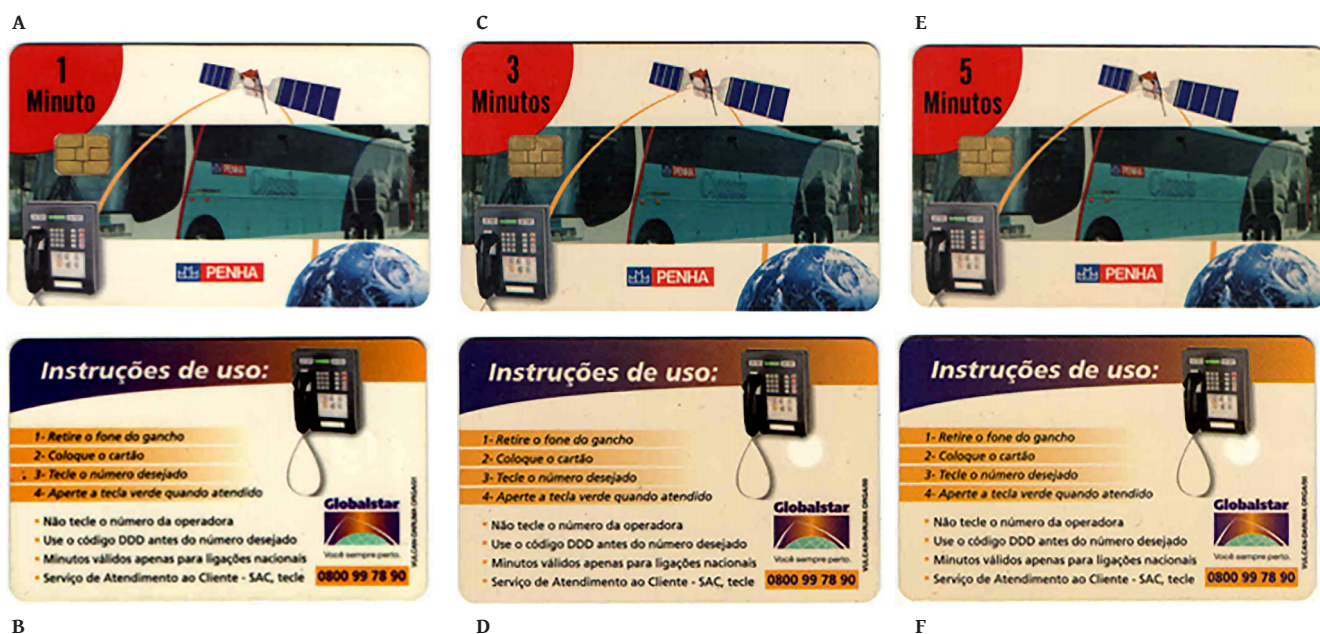


Fig 3. Specific phonecards (front and respective backside) used in payphones of Empresa de Ônibus Nossa Senhora da Penha S.A. model Classis

Source: Private collection, 2021



Fig 4. Specific phonecards (front and respective backside) used in payphones of Viação Itapemirim S.A. transport company buses, model Golden.

Source: Private collection, 2021

The phonecard characteristics were identified including card catalog number, issue date and face value (expressed in phone-time). A brief description of the cards was also made. In addition, the type of microchip module (CM) and number printed per card were identified following procedure described by TAVARES AND SILITONGA (2021b). The market evaluation (expressed in US\$) of the mint and fine used cards in 2004 was also identified from the catalog published by PITARRESI (2004) (Table 1). The price of the cards (expressed in US\$) as a collectible item in Brazil in July 2021 was also identified by consulting a professional phonecard collector (currency conversion from Brazilian real to American dollar was carried out on 17 July 2021) (Table 2).

Table 1. Characteristics of specific phonecards used in payphones of Empresa de Ônibus Nossa Senhora da Penha S.A. and Viação Itapemirim S.A. transport company buses, according to catalog published by PITARRESI (2004)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRA-C-1	N/A	1 min.	Bus "Classic" 1	CM: N/A	PF: N/A	12	5
BRA-C-2	N/A	3 min.	Bus "Classic" 2	CM: N/A	PF: N/A	30	8
BRA-C-3	N/A	5 min.	Bus "Classic" 3	CM: N/A	PF: N/A	1R	12
BRA-C-4	N/A	1 min.	Bus "Golden" 1	CM: N/A	PF: N/A	12	5
BRA-C-5	N/A	3 min.	Bus "Golden" 2	CM: N/A	PF: N/A	30	8
BRA-C-6	N/A	5 min.	Bus "Golden" 3	CM: N/A	PF: N/A	40	12

(1)= Card catalog number; (2)= card issue date; (3)= card face value (expressed in phone-time); (4)= brief description of the card; (5)= type of microchip module (CM); (6)= number printed per card; (7)= market evaluation (expressed in US\$) of the mint and (8)= fine used card; min.= minutes; N/A= not available; PF= printing figures; 1R= difficult to find.

Table 2. Market evaluation (expressed in US\$) of the mint phonecards as a collective item in Brazil in 2021

Phonecards*	Price**
Complete set BRA-C-1 + BRA-C-2 + BRA-C-3	175.93
Complete set BRA-C-4 + BRA-C-5 + BRA-C-6	117.29

*Catalog codes by PITARRESI (2004). **Price was informed by a professional Brazilian phonecard collector (currency conversion from Brazilian real to American dollar was carried out on 17 July 2021).

Conclusions

A mobile phone-type payphone working with tradicional phonecards, developed by TELPA and installed in 1994 on Rogetur Transporte e Turismo Ltda. transport company buses, is the first consolidate case of a payphone used in a bus in Brazil. Specific phonecards developed by Globalstar, Inc. in 2000 were used in payphones installed on Viação Itapemirim S.A. and Empresa de Ônibus Nossa Senhora da Penha S.A. transport company buses.

References

- BAZANI, A. **Anatel estuda telefone público em ônibus**. In: Diário do Transporte. Central Brasileira de Notícias (CBN), São Paulo, Brasil, 2013. (<https://diariodotransporte.com.br/2013/02/13/anatel-estuda-telefone-publico-em-onibus/>)
- ÔNIBUS URBANOS. **Ônibus com telefone público? Na Paraíba tinha**. In: Ônibus urbanos, Matérias históricas, Especial de domingo, Paraíba, Brasil, 2015. (<https://onibusparaibanos.com/2015/05/24/onibus-com-telefone-publico-na-paraiba-tinha/>)
- OPANTANEIRO. **Orelhão com tecnologia de celular é instalado em ônibus em Porto Alegre**. In: Opantaneiro, Tecnologia, 2008. (<https://www.opantaneiro.com.br/tecnologia/orelhao-com-tecnologia-de-celular-e-instalado-em-onibus-em-porto-alegr/74354/>)
- PITARRESI, D. **World Phonecard Catalogue. Specialized Edition, 17. Central & South America: Brazil (Magnetic & Microchip) - Costa Rica (Magnetic) - El Salvador - Guatemala - Paraguay**. Written by Daniele Pitarresi and assisted by Nathalie Vanelslande & Gaston Teplitzki. Published by MVCards, 2004. 63 pp.
- PREFEITURA MUNICIPAL DE PORTO ALEGRE. **Carris instala telefone público na linha T5**. In: Prefeitura Municipal de Porto Alegre, Comunicação Social, 2007. (http://www2.portoalegre.rs.gov.br/cs/default.php?reg=73087&p_secao=3&di=2007-04-18)
- RIPARDO, S. **Telefonia celular via satélite chega aos ônibus**. In: Folha de São Paulo, Folha-News, Brasil, 2000. (<https://www1.folha.uol.com.br/folha/informatica/ult124u2624.shtml>)

SOFANOTETO. **Tecnologia no busão**. In: Sofanoteto, 2008. (<http://sofanoteto.blogspot.com/2008/07/tecnologia-no-buso.html>)

TAVARES, W. DE S. **Revival of phonocard collection as a hobby in Brazil**, 2021 (in press)

TAVARES, W. DE S.; SILITONGA, R.U. **Collectible African phonecards of butterfly thematic**, 2021a (in press)

TAVARES, W. DE S.; SILITONGA, R.U. **Description of 10 Australian phonocard folders of animal thematic**, 2021b (in press)

TELESÍNTESE. **BrT: Único Wi-Fi e telefone público em ônibus**. In: Telesíntese, Portal de Telecomunicações, Internet e TICs, 2008. (<https://www.telesintese.com.br/brt-unico-wi-fi-e-telefone-publico-em-onibus/>)

VIANA, P.R. **Ônibus Brasil**. In: Ficha técnica, 2011. (<https://onibusbrasil.com/pauloviana/458796>)

Recebido: 17 de junho de 2021.

Aprovado: 07 de agosto de 2021.