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## **Failures and successes: local and national Australian sound innovations, 1924-1929**

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# Failures and successes: local and national Australian sound innovations, 1924-1929

Brian Yecies

## Introduction

This article aims to expand our knowledge of the success or failure of sound technologies in the Australian exhibition market in the years between 1924 and 1929. Crucial to this issue are the complex relations between previously unrecognised groups and individuals involved in promotion of sound technology and in the wiring of Australian cinemas. The process by which all 1,420 of Australia's cinemas were finally wired for sound by 1937<sup>[1]</sup>, was not one in which an American monopoly had demonstrated unchecked power over a passive Australian market. There were a large number of national and international contributors to this process and a significant degree of contestation in the innovation of these powerful new technologies.

While it has been demonstrated previously that the American film industry primarily adopted sound technology for economic reasons, it may be that the Australian film industry had little choice in the matter.<sup>[2]</sup> The largest Australian exhibition chains, Union Theatres and Hoyts, made enormous investments and ambitious commitments to convert to sound with American companies and their American technology in order to screen American sound films. The distribution side of the Australian motion picture industry was dominated largely by American interests, making the Australian market a large source of foreign revenues for US film companies.<sup>[3]</sup> When the local subsidiaries of Fox, First National-Warner Bros., FBO, MGM, and Paramount--all controlling members of the Motion Picture Distributors Association of Australia--began adding sound films to their catalogues, it seemed as though the conversion to sound was inevitable, at least initially for Australia's capital cities.

One of the earliest participants in the innovation of commercial sound in Australia was the De Forest Phonofilms Company. Between 1924 and 1928, De Forest Phonofilms entered Australia via New Zealand because that is where its first system in the region landed in 1924.<sup>[4]</sup> De Forest Phonofilms Australia Ltd. was registered with a capital of £100,000 (approximately \$US500,000) in Sydney on 2 September 1925, about three years after its sound-on-film system was first demonstrated to a public audience in the United States.<sup>[5]</sup> In mid-1927, the Australian Phonofilms organization signed with Union Theatres to pre-wire its Australian capital city venues a full year before the giant American electrical firm Western Electric and its engineers arrived in Australia.<sup>[6]</sup>

Australian Phonofilms used Lee de Forest's American model of promotional hyperbole to sell installation contracts and sound film supplies. Phonofilms' promotional campaigns in *Film weekly* and *Everyones*, as well as the company's trade demonstrations, provided a model of how to sell sound for the Australian motion picture industry. Despite the fact that the company was better at delivering promotional hype than at achieving mass installations, DeForest played a critical role in the advancement of sound technology as

well as the exposure and acceptance of that technology in Australia. Phonofilms Australia provided hands-on training and design ideas for Australian engineers and inventors of sound equipment. Wherever Phonofilm equipment arrived, local engineers had to adapt, modify, or repair the basic sound-on-film apparatus with their own know-how and experience. The company also initiated installation, distribution, and adoption policies that were later used by Australian inventors when they began to market their home-grown sound systems.

De Forest's early models of promotion, diffusion, and adaptation were clearly a stimulus for other Australian sound-on-film and sound-on-disc "Talkie" innovators including Australtone, Astorex, Beaucaire Tone, Clarisound, Defoy, Glynne, Han-a-phone, Magna-Cousta, Markophone, Standardtone, Syncrophone, Vocaltone, Wintle and Xlton. Thanks in part to De Forest Phonofilms, the Australian businessmen and radio and electrical engineers behind these systems gained valuable knowledge of how to promote their sound systems.

My patent research suggests that de Forest's Phonofilm equipment was the direct ancestor of "Australian" sound systems such as the Auditone, Lumenthode, Ward, and Raycophone systems. Local inventors and innovators, such as Raymond Allsop (a Sydney radio engineer), and Leslie Rowson and Charles Ward (both engineers and projectionists from New Zealand), all developed and marketed their own sound projection systems whose inner mechanics closely resembled the basic Phonofilm concept and design.<sup>[7]</sup> Design specifications of the De Forest Phonofilms system (as well as other patent specifications of American and European motion picture sound inventions) were available for inspection at the Public Records Office in each Australian capitol city. Nine De Forest patents were actually filed in Australia between 1926 and 1928.<sup>[8]</sup> Phonofilms' sound-on-film demos and trials between 1925 and 1927 were also key avenues for Australian inventors and engineers to gain knowledge and exposure to talkie technology.

In late 1928, Western Electric began to make a major impact on the Australian motion picture industry. Western Electric sound equipment was introduced to a market that was already familiar with the Phonofilms system. Western Electric's Australian franchise (WE-Australia) had more financial support, installation contracts, and a larger workforce than Phonofilms Australia ever had, including a team of 300 visiting and local installation engineers and company executives. As a result, WE-Australia was far more successful than Phonofilms in implementing its sound technology.

By mid-1929 competition was highly developed in the Australian exhibition market as local alternatives to Western Electric were produced and promoted. The trade papers now began encouraging these other Australian systems to compete with Western Electric. Essentially, the editors of *Film weekly* were giving the green light to Raycophone, Auditone and others like them, which had been able to (or were about to) demonstrate and publicize their local sound systems.<sup>[9]</sup> Positive editorial opinions and testimonials from exhibitors helped achieve this. However, this was not simply a case of nationalist antipathy to an American company, as other American systems such as RCA Photophone and Pacent also became competitors in the Australian market around this time.<sup>[10]</sup>

In mid-1929 RCA Photophone Inc. and Pacent Reproducer Corporation, the second and fourth largest American sound companies to wire cinemas in the United States, sent synchronized sound projectors to Australia. RCA Photophone equipment arrived at the

end of May 1929, and Pacent equipment arrived in New Zealand in August 1929 and in Australia in February 1930. Both companies saw Australia as an important market in which they eventually could compete against Western Electric. Their arrival is important because they complicate the notion of an American monopoly of sound technology in Australia.

Douglas Gomery has suggested that "Western Electric and RCA dominated the field for exhibitors' equipment"<sup>[11]</sup>, but the case was somewhat different in Australia. Mike Walsh has pointed out that none of the American sound companies wiring Australian theatres and cinemas acted in concert with each other or successfully "wielded ruthless power over Australia"<sup>[12]</sup>. My research corroborates Walsh's conclusion that there were multiple and competing American strategies for the diffusion of sound in Australian cinema.

By mid 1929, it was clear that Western Electric could not meet the Australian demand for sound equipment on its own. The demand for sound technology among Australian exhibitors rose much quicker than Western Electric and the American distribution exchanges in Australia had anticipated. RCA and Pacent, along with a myriad of Australian systems, were soon trying to meet equipment demands in places where Western Electric could not.

Western Electric's initial efforts at domination of commercial sound technology in Australia frequently involved intimidation. However, few Australian inventors and sound companies capitulated to this pressure. Rather, Australian sound companies contested the apparent American leadership of sound in various ways and with differing degrees of success. Raycophone, for example, represents a sound system which succeeded nationally because of support from cinema and theatre entrepreneurs and other interested parties such as politicians and trade unions. Australtone, on the other hand, failed to wire regional Australian cinemas because it could not secure the approval of American distributors, who withheld films from non-approved systems. At one stage, Hoyts' executives promoted the Australian Markophone as a promising national competitor to Fox Movietone, but abruptly withdrew this support after Fox bought control of Hoyts in 1930.

## **Factors in success and failure**

The key factors which influenced the successful diffusion of a sound technology were its technical quality, its interchangeability with other equipment and with a range of films, the availability of servicing, its price, the timing (and speed) of installations, the financial stability and political influence of the parent company and its ties to cinema chains, and the influence of trade media. The significance of each factor was not the same for each company. For example, de Forest Phonofilm had an entirely different target market from the one Western Electric assumed. Phonofilm deliberately operated outside of the Hollywood feature system, aiming to set up an independent, vertically integrated international company to produce, distribute, and exhibit short film programs. Phonofilms' Australian franchise tried to wire only a limited number of cinemas with its novel technology. Although it had no local competition before December 1928, Phonofilms Australia ultimately failed because it could not deliver a system which was interchangeable with American sound feature films. As a result, Phonofilm technology was not supported in Australia by the local Hollywood exchanges.

The success of sound features in the US in 1926 and 1927 completely changed the situation by changing the extent and nature of the demand for sound. It was at this point that Western Electric began to dominate the picture, with its very close ties to Hollywood feature film production. Western Electric succeeded because it could guarantee to be able to provide "quality" sound for all Hollywood features, and could provide complementary "quality" exhibition equipment. At the same time, Western Electric was never going to be able to become a real monopoly because it could not possibly wire the estimated 16,000 cinemas in the US, let alone the 95,379 cinemas around the world.<sup>[13]</sup> It went into foreign markets targeting the large, lucrative first-run city chains.

Demanding comparable "quality" (which it presumed to define) from an alternative system was Western Electric's primary control device. Each sound company had to be able to gain Western Electric's approval in order to secure distributor's contracts for the supply of sound films produced with WE recording equipment. RCA Photophone succeeded because its US parent company and Western Electric had agreed to cross-license their patents in July, 1928 and thus make their systems fully compatible.<sup>[14]</sup> As a result, when RCA arrived in Australia in May 1929, the quality of its system had been accepted and endorsed by Western Electric for nearly a year. Other systems such as the Australian Australtone were not as fortunate, as it failed to meet Western Electric's standards. Hence, a system's versatility--its ability to handle films recorded in the Movietone, Vitaphone, and RCA Photophone format--played a vital role in its success.

Service was also a part of a sound company's ability to deliver a package to exhibitors. Both Western Electric and RCA established regional service centres throughout Australia to provide general maintenance and equipment upgrades. However, Western Electric's mandatory ten-year fee-based service contracts became a disincentive to exhibitors and provided an opening for companies that did not demand a service contract. RCA most likely became a popular alternative system in Australia because it offered a free service plan. The Australian system, Markophone, which promoted its "foolproof" equipment, was also initially popular with exhibitors who did not want to worry about expensive and time-consuming repairs.

Alternatively, price was a crucial factor in helping the American Pacent system appeal to exhibitors. Its system was sold outright, unlike Western Electric and RCA who both demanded ten year leases. Pacent promoted itself as a successful alternative because of its ability to attract the support of Warner Bros., the best-known sound film studio, who preferred Pacent's lower prices for installations in its exhibition chain.<sup>[15]</sup> In fact, Pacent's ability to offer a quality, interchangeable system at about one-third of Western Electric's price threatened Western Electric's US market dominance, motivating Western Electric to file law suits against Pacent's founder, Louis G. Pacent. The Pacent company failed in 1931 after US courts found the system in violation of Western Electric's patents.<sup>[16]</sup> As a result of this US failure, Pacent reorganized its Australian operation and continued under a new brand name--Reprovox.<sup>[17]</sup>

Western Electric's slow installation speed also provided a window of opportunity for other systems able to take advantage of the explosive demand for sound. This factor was repeatedly referred to in Photophone, Pacent, and Raycophone advertisements, and was as crucial as price and at times even more crucial than quality. As well as timely installation, a company needed a good sense of strategic timing. Raycophone's timing, for example, clearly gave it a considerable advantage in that it was the first Australian company in the

market with a commercially viable sound projector. Raycophone was successful partly because it made all the right moves at the right time. However, even Raycophone Ltd. experienced problems in wiring cinemas fast enough. In October 1929, it claimed that it could not wire the Sydney Royal Theatre quickly enough to replace RCA equipment there because of its then current installation commitments.<sup>[18]</sup> Hence, other sound companies, such as Markophone, Vocaltone, and Astorex, entered the market after mid-1929 and began promoting their systems as an alternative speedy solution for exhibitors waiting for sound. They were at least moderately successful.

Speed and timing were dependent on the factors of financial stability and backing. A successful sound company had to have sufficient capital to underwrite equipment manufacture or importation, and then to complete installations. Australian Synchronised Sound Pictures Ltd. (which made the Australtone) had enough money for initial small-scale production of demonstration sound-on-disc films. However, it appears that it was substantially undercapitalized for the continuing production of its own films--which became essential once most of the major distributors refused to supply sound films to exhibitors using Australtone equipment. Australtone failed largely because of its financial instability, even after it was able to overcome significant "quality" issues by adding sound-on-film capacity to its system.<sup>[19]</sup>

The financial problems faced by sound companies were, of course, exacerbated by the Depression, which had a profound impact on the Australian sound industry as it had on industry in general around the world. Companies which might have survived in other circumstances quickly fell victim to the general mood of financial instability as loan capital dried up. Auditone is an example of this, collapsing financially in November 1930.<sup>[20]</sup> The Depression effectively ended opportunities for smaller sound companies to expand.

Industrial "clout" also played a key role in a sound company's success (or failure) because it was linked with financial stability and backing. A lack of political and industrial influence contributed to the failure of the Australian Phonofilms franchise because its promoters failed to integrate the company into the local film industry. Raycophone, however, led the rest of its Australian competitors because of the power of the people on its board and the backing it was consequently able to secure in the press. Raycophone's supporters were a network of influential contacts, including J. C. Williamson Ltd., Keith Murdoch, and the Tait brothers. Their influence would have substantially affected relations within the film trade (that is with distributors, exhibitors, and even with Western Electric), with government, and with the banks. Raycophone's connections were likely to have helped it to secure loans and re-schedule debts even in the Depression.

In addition, publicity--particularly in the trade papers *Film weekly* and *Everyones*--would have been affected by these powerful connections. Much of the material published in these trade papers reflects the ways in which the most powerful forces in the local industry viewed the issues and the inside forces. The trade papers could be expected to take the side of the powerful in conflicts against the industrially marginal. Several of the small Australian firms that failed had catastrophic events that were well publicised. For Australtone it was a boycott by distributors, while for Markophone, it was a spectacular failure to "do the job", and for First British, it was the loss of a national sponsor--all prominently noted by a trade press, reliant on the advertising support of the major

companies.<sup>[21]</sup>

Ties to a cinema chain also had an effect on a company's success or failure because such ties provided a sound system with guaranteed wiring opportunities and increased chances of acceptance by other exhibitors. For example, Markophone's supporters originated mainly from the Hoyts organization.<sup>[22]</sup> Markophone was consequently able to secure Fox Movietone sound films via its connection to Hoyts, which had a very strong relationship with the American exchange.<sup>[23]</sup> However, Markophone's success ended when Fox took over the Hoyts chain in September, 1930. Markophone failed after this period at least partly because Fox wasn't interested in using the Australian system to help wire Hoyts' remaining silent cinemas. Fox had its own Movietone sound-on-film system tied with Western Electric.

## Sound continuum

This overview should show that the coming of sound in Australia was not simply an invasion by American media imperialism, but rather a complex narrative with many players and many factors influencing success or failure. We can trace the story back at least to 1924, when Charles Ward, the innovator and engineer of Auditone equipment, and Leslie Rowson, the original Raycophone patent holder, gained valuable experience on early De Forest Phonofilm technology. These two men were part of the larger picture of the coming of sound as they continued to apply their engineering skills to new jobs in other sound companies throughout the mid-1930s. (Ward and Rowson were associated with no fewer than seven sound companies between them.)

The stories of the successes and failures of sound companies and sound innovations all have vastly different beginnings and endings. In this way, the coming of sound to the Australian cinema, as in the American context, was as Douglas Gomery suggests: "not a revolution, but a systematic gradual evolution".<sup>[24]</sup> The diffusion of sound technology to the Australian exhibition industry took place over a longer period of time relative to the development of other mass media, including radio, telephony, phonography, and television.

During this process, American interests such as Western Electric entered Australia intent on controlling the battles this new technology. Local companies initially had to contend with American terms or go down to defeat. Yet this is only the start of a more detailed narrative involving the way that companies such as Raycophone (and many others) *did* innovate, adopt, and if not thrive, then at least survive.

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## Endnotes

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<sup>[1]</sup> *Everyones* 16 June 1937: 4.

<sup>[2]</sup> Douglas Gomery, "The coming of sound to the American cinema: a history of the

transformation of an industry", PhD. Diss. (University of Wisconsin-Madison, 1975).

[3] Kristin Thompson, *Exporting entertainment: America in the world film market 1907 – 1934* (London: British Film Institute, 1986).

[4] *Everyones* 30 July 1924: 19; *Everyones* 10 September 1924: 20; *Everyones* 18 February 1925: 7.

[5] *Everyones* 2 September 1925: 16. However, company records indicate that earlier contracts dating back to July 1924 existed between New Zealanders William P. Kirkwood, George C. Bayly (a sheep-farmer) and George Hall (a "gentleman") jointly, and Thomas Currie, who appeared to control British Phonofilms ("Agreement", 29 October 1925: 1, NSW State Records-Kirkwood #9756).

[6] *Film weekly* 12 May 1927: 11.

[7] Australian Intellectual Property Organisation, Canberra & Melbourne (AIPO) #19,967/29; AIPO #21,970/29; AIPO # 21,970/29.

[8] AIPO #46/26; AIPO #46/26 Amended; AIPO# 10,585/27; AIPO #10,584/27; AIPO #7988/27; AIPO #7989/27; AIPO# 13,550/28; AIPO #12,848/28; AIPO #12, 849/28.

[9] *Everyones* 8 May 1929: 6; *Everyones* 5 June 1929: 6; *Film weekly* 11 July 1929: 16.

[10] *Everyones* 10 June 1929: 18; *Everyones* 11 September 1929: 25; *Everyones* 3 July 1929: 16.

[11] Douglas Gomery, *Shared pleasures: a history of movie presentation in the United States*. (London: British Film Institute, 1992), 223.

[12] Mike Walsh, "The years of living dangerously: sound comes to Australia", in *Twin peaks*, ed. Deb Verhoeven (Melbourne: Australian Catalogue Co., 1999), 77.

[13] *Everyones* 16 June 1937: 4

[14] For a more detailed account of the relationship between RCA and Western Electric and their patent agreements see: Erik Barnouw, *A tower in babel: a history of broadcasting in the United States*, vol. 1 to 1933 (New York: Oxford University Press, 1966), 60; and Douglas Gomery, "Failure and success: Vocafilm and RCA Photophone innovate sound", *Film reader 2* (1977): 216; and Patrick Ogle, "The development of sound systems: the commercial era", *Film reader 2* (1977): 198-212.

[15] *Shared pleasures*, 224; Crafton, Donald, *The talkies: American cinema's transition to sound, 1926-1931*, vol. 4 of *History of the American cinema*, gen. ed. Charles Harpole, 5 vols. (New York: Charles Scribner's Sons, 1997): 198.

[16] For a more detailed discussion of Pacent's legal battles with Western Electric see: Earl I. Sponable, "Historical development of sound films, Part 3-7", *Journal of the society of motion picture engineers* 48 (1947): 419; Crafton, 198.

[17] *Film weekly* 25 June 1931: 8.

[18] *Everyones* 26 June 1929: 7; *Everyones* 7 August 1929: 24; *Everyones* 28 August 1929: 10.

[19] *Everyones* 23 October 1929: 7.

[20] According to Auditone Ltd. company records dated 7 November 1930, Auditone Ltd. had begun to voluntarily wind up business and liquidate itself--fifteen months after the company had been formed (NSW State Archives #17/5726-12888).

[21] In April 1929 key Australian De Forest Phonofilms personnel (Charles Ward and Stanley Hawkins) formed the First British Talking Picture Equipment Company Ltd. after leaving the Australian franchise. Ward and Hawkins pooled the experience they had gained from their positions at Phonofilms Australia and launched Ward's sound-on-film system (which improved on the De Forest Phonofilms model).

[22] Markophone was a sound head and synchronized disc attachment plan created by Hoyts Theatres' cinema executives Leon Samuel Snider, Edward Lewis Betts, and Alexander Henry Noad, collectively known as the "Vendors" of the Markophone system. Support from Hoyts Theatres Ltd. executives, including financial backing from large Hoyts shareholders and engineering support from Hoyts technicians, helped disseminate Markophone until the mid 1930s, which was significantly longer than Australtone and other alternative Australian sound systems.

[23] *Film weekly* 17 January 1929: 21.

[24] Gomery, (1975), 445.

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