

Transformative Soundscapes: Innovating De Forest Phonofilms Talkies in Australia

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The coming of sound to cinemas around the world traditionally has been included in the writings about great men and all-powerful companies and how their visions and integrated industry connections helped them maintain a dominating monopoly of the motion picture industry. Important and canonical reports of these business histories have been documented and offered by Tino Balio (1976; 1985; 1993), David Bordwell, Janet Staiger, and Kristin Thompson (1985), Douglas Gomery (1986), Thomas Schatz (1988), John Belton (1994), Robert Sklar (1994), Donald Crafton (1997) and Ruth Vasey (1997) in the US and by Sally Stockbridge (1979), Susan Dermody (1981), John Tulloch (1982) and Graham Shirley and Brian Adams (1989) in Australia and by Rachael Low (1971) and Ian Jarvie (1992) in the UK. Also included in this history is a focus on the pioneering efforts of great experimenters and innovators such as Theodore Case, Lee de Forest, Earl Sponable in the US and Raymond Allsop, Arthur Smith and Clive Cross in Australia, who were all working outside and/or alongside the motion picture industry.

The work of one person in particular -- Lee de Forest -- stands out in these motion picture business studies because of his contributions to the early development of synchronised motion picture sound technology. The detailed history surrounding de Forest's research experiences and achievements identify de Forest as a significant factor in the convergence of radio and cinema technology and a key figure who indirectly influenced the direction of the transition to sound (Geduld, 1975: 91). De Forest used patents as commodities and as a kind of promotional currency, which he advertised and exploited in order to pursue the business ventures he deemed important. He was also known for his aggressive attempts to raise funds to help his American company send programmes of short talking films around the world. However, he was eventually frozen out of the US market by the major Hollywood studios and their international coalitions with the giant American electrical firms Western Electric and General Electric-RCA as well as the German Tobis-Klangfilm conglomerate. Despite his important role in the coming of sound, few studies to date have provided an examination of the impact that de Forest's early sound technology and international business models have had on a local level.

The research presented here illustrates how de Forest's entrepreneurial business ideas as well as his patented innovations encouraged the improvements in radio and cinema technology through the work of others. That is to say, his American company De Forest Phonofilms noticeably influenced the ways which later commercial sound technology was innovated, promoted, distributed and installed. De Forest achieved these aims in part by licensing his patents to foreign representatives in Spain, Japan, Cuba, Canada, South America (Argentina), South Africa and England. This was a key strategy that helped promote the spread of sound in foreign exhibition markets. In the process, the American De Forest Phonofilms Company facilitated the experimentation and training with sound technology in the markets that acquired the company's licenses. Individuals representing the various Phonofilms companies

overseas then became surrogate promoters of the system and sound technology in general. This study shows that this was the case in Australia as well.

This article presents a case study of the commercial sound activities that the American De Forest Phonofilms Company, first through British Phonofilms and then through De Forest Phonofilms Australia Ltd. ("Phonofilms Australia"), helped initiate in Australia between 1924 and 1931 in order to promote the American technology invented by Lee de Forest. It focuses on the attitudes, familiarities and debates surrounding talking motion pictures that Phonofilms Australia and its initial technicians from New Zealand inspired after 1924. The coming of De Forest Phonofilms to the Australian cinema played a critical role in the advancement and experimentation of motion picture sound technology. It also played a role in the exposure and acceptance of that technology in Australia by setting the stage for further wiring and adoption of commercial sound innovations. This case study aims to provide a richer understanding of the coming of sound to Australia while revealing some of the ways with which early sound technology in general was promoted to exhibition markets around the world.

A Sound Campaign

The Australian Phonofilms story involved a process of diffusion, which was not immediate or instantaneous. It involved a series of interrelated stages and movements over a span of time, including phases of awareness, interest, evaluation and trial, and adoption (Rogers and Shoemaker, 1971: 100). Phonofilms Australia was not always able to control the chronological order and the extent to which others pursued and responded to each stage. Stages rarely occurred independently of the others. There were situations in which the evaluation and trial of Phonofilm simultaneously created both awareness and interest. In addition, rejection often replaced the adoption stage. The company could only play a significant role in the process by trying to maximize the impact of each stage through trade demonstrations (trials), abundant advertisements and publicity articles in *Film Weekly* and *Everyones* -- Australia's primary film industry trade papers at the time -- and a series of spokesmen.

The company's publicity campaign ultimately aimed to promote an Australian De Forest franchise and get its new technology adopted. Each initiative played a key role in how sound was spread. This was a process that occurred on a micro level -- getting a specific sound system set up into a specific cinema, and a macro level -- ending up in the adoption of sound technology in general. *Film Weekly* and *Everyones* played an instrumental role in the rise and fall of the Phonofilms organization because they helped construct industry views regarding the system's potential success (and ultimate failure). The trade papers persuaded exhibitors with favourable or unfavourable reports towards particular equipment and often advertised potential industry developments ahead of actual production. Publicity articles and editorials reported events as though they were a *fait accompli*. However, such 'news' (including equipment reviews, installation announcements and technical articles) also increased general knowledge of sound technology and competing sound systems.

New Sound Awareness

Six months after the American De Forest Phonofilms Company was formally established in the United States in 1924, William P. Kirkwood, a New Zealand exhibitor and businessman, became the central spokesperson for the Phonofilm system in Australia and New Zealand. In July 1924 Kirkwood, who had met Lee de Forest in April 1922 during a tour of the US, began to form a De Forest Phonofilms franchise in Australia. Kirkwood was negotiating the rights to the American De Forest Phonofilms patents via British Phonofilms. He seemed to have shared de Forest's zeal for sound cinema (*Everyones*, 3/3/26: 3).

De Forest Phonofilms Australia Ltd. was registered with a capital of £100,000 (approximately \$500,000 US dollars) in Sydney on 02 September 1925. This was about three years after the sound-on-film system was first demonstrated to a public audience in the United States. Technically speaking, Phonofilms Australia was a company whose assets and securities were held outside of Australia by British Phonofilms and other British shareholders. Despite the initial impression Kirkwood may have given in his trade articles, the crux of the investment behind Phonofilms Australia was not directly held by its American parent company. In September 1926 *Film Weekly* reported that Mr. Cyril Frank Elwell, a former Sydney exhibitor, had perfected the Phonofilm system in London after acquiring it from de Forest (*Film Weekly*, 30/9/26: 26). Elwell sent the apparatus to Sydney from London for general exhibition, confirming Phonofilms Australia's connection with British Phonofilms. According to company records more than one-third of the £100,000 capital invested in Phonofilms Australia was immediately sent to London to finance British Phonofilms. Therefore, Phonofilms Australia was a franchise of British Phonofilms rather than a franchise of the American company while Phonofilms Australia owned the local rights to de Forest's brand-named equipment and patents in Australia.

During this time, Kirkwood functioned as the communications link between Lee de Forest, the British De Forest Phonofilms organization, Phonofilms Australia, and the Australian/New Zealand motion picture industry. One of his primary tasks was to create awareness and influence the diffusion of Phonofilms technology in Australia in the direction desired by Lee de Forest, and later the syndicate that controlled the Australian and New Zealand rights to the Phonofilm system. The purpose of Kirkwood's initial publicity campaign was three-fold. First, establishing credibility as a dependable sound film reproducer was paramount but a kind of technological flexibility was also a factor. Exhibitors needed a projector that could run both silent and sound films with ease. Second, Kirkwood's sales and investment proceeds benefited from the image of Phonofilm as a system that could attract ongoing installation contracts. Third, the general public was invited to buy shares in the newly formed Phonofilms Australia Company but a large response hindered future applicants in successfully attaining shares.

Kirkwood had created the illusion of demand through awareness of the Phonofilm brand name. The company's formation was announced in a full-page advertisement (in addition to a news article in the same issue) in order to secure additional investment capital (See *Figure 1*). Phonofilms Australia's share float, which occurred about nine months before Warner Bros.' New York première of their sound-on-disc feature *Don Juan* publicity illustrated a method which other Australian sound companies later followed when they began creating demand for their talkie equipment after mid-1929.

EVERYONES

De Forest Phonofilm (Australia) Ltd.

CAPITAL £100,000

ONE OF THE MOST AMAZING ACHIEVEMENTS OF THE AGE
THE SPEAKING MOVING PICTURE PERFECTED AT LAST

THE Phonofilm was achieved by Dr. Lee De Forest, world-famed scientist, whose inventions in radio and electricity are used by the greatest companies in existence. It is already the sensation of the motion picture world; its future possibilities and earnings are beyond computing.

In America its success has been phenomenal—music, singers, drama, vaudeville, acts, etc., being reproduced with perfect synchronization.

Phonofilm is now being made and exhibited in England by De Forest Phonofilms Ltd., and speaking pictures made by this company have already been received in Sydney, and will be exhibited in due course.

During the Wembley Exhibition Phonofilm was exhibited daily, and around the greatest interest.

Phonofilm will be exhibited in Wellington (N.Z.) theatres in the course of a few days. It is being assessed highly in the "Tivoli (Strand) London, one of the most up-to-date and select picture theatres in the world.

Phonofilm was demonstrated in Wellington (N.Z.) and Sydney, the press agreeing that the possibilities were unlimited. The film used in these demonstrations were some of the earliest made by Dr. De Forest, and each subject did not exceed five hundred feet. Since, comedies of two thousand feet and drama, exceeding three thousand feet have been made, and Balieff's "Clavier Sonoris" has been Phonofilmed in color. To Phonofilm a work of such magnitude was a big undertaking, the cost running into 300,000 dollars.

It has been computed that there are 100,000,000 attendances at Australian theatres (picture) annually, and from these figures can be computed that a company handling films so readily saleable as Phonofilm must return a handsome profit to investors.

The Australian company will hold the sole and exclusive rights with all improvements, and with the genius of Dr. Lee De Forest behind it, together with the backing of the strong parent companies in England and America, the success of the proposition is assured.

Already some thousands of shares have been sold in the Australian company, verification of which can be given.

De Forest Phonofilms (N.Z.) Ltd. was over subscribed within one month.

All interested in this sound proposition are advised to apply early to the brokers for full information and prospectus.

BROKERS, MESSRS. WM. TILLEY & CO., 78 PITT ST., SYDNEY.

Figure 1. De Forest Phonofilms Advertisement: *Everyones*, 4 November 1925, p. 37. Reprinted by permission of the National Library of Australia.

Another promotional technique Kirkwood mastered during this time was using *Film Weekly* and *Everyones* to introduce 'news' of talkie events and current industry news from the United States and England concerning de Forest and the Phonofilm system. Essentially, Kirkwood persuaded *Everyones* and *Film Weekly*, exhibitors and general industry people that the transition to sound was revolutionary and inevitable. After July 1924 *Everyones* began consistently publishing articles by Kirkwood regarding "Speaking Pictures". These trade articles not only introduced de Forest's system but also provided an understanding of how it functioned. Kirkwood used most of late-1924 to position himself as both an authority on Phonofilm equipment and a 'talkie expert'. His clear intention was to increase the Australian motion picture industry's general knowledge of sound pictures by exposing exhibitors and tradesmen to the latest developments in the United States while specifically focusing on de Forest's Phonofilm technology. The trade papers continued substantial coverage of the coming of De Forest equipment to Australia and exhibitors generally looked forward to the novel technology. The Australian awareness of the Phonofilm system had definitely created interest in the talking picture technology.

In late 1926 and early 1927, *Film Weekly* changed its evaluation of Phonofilm technology from positive to negative when it began casting doubt on the future of de Forest's US sound-on-film operation, "Emulation always follows a vogue and thus we find the De Forest Phonofilm is meeting with considerable opposition in the United States from other speaking picture machines" (*Film Weekly*, 3/2/27: 4). As a result, the Australian Phonofilms Company began creating awareness of British Phonofilms activities in order to direct attention away from de Forest's commercial and financial troubles in the US. In early 1927, statements such as, "Incidentally, this company is all British", began to appear more frequently (*Film Weekly*, 24/3/27: 17).

After late 1926 Phonofilms Australia also began to use its connections with the English franchise to justify preferential treatment by the Australian government. Since Phonofilm supplies were mainly British, the Australian Parliamentary Tariff Board gave Phonofilms Australia preferential treatment in the form of reduced tariffs. At that time there was a 40% general tariff on cinema equipment (projectors and arc lamps) sent from the United States while only 25% was levied on equipment from Britain. In addition, the agitation for an Empire quota of films in England, which considered Australian films as 'British', avoided the anti-American sentiment aired in the Commonwealth Government's 1927 Royal Commission inquiry into Australia's motion picture industry (Shirley and Adams, 1989: 75).

Compounding Interest in Sound

In the interest stage, exhibitors, engineers, businessmen and politicians formed a desire to know more about Phonofilms and its capabilities. At the same time, Phonofilms Australia sought to create increased interest in its company and its system. In Australia, the interest stage could be said to have started at the same time as the awareness stage in 1924 with the start of the publicity blitz surrounding Phonofilms in the trade papers. Judging from the length and the frequency of his articles in *Everyones* and *Film Weekly*, Kirkwood's ongoing strategy was to pitch as many lines of interest in Phonofilm technology as he could. Here, Kirkwood was the quintessential representative for the Phonofilm system. Later promoters for the Phonofilm system in Australia included company salesmen, politicians, engineers and exhibitors who signed equipment deals. Possibly more important were T. J. Ley, Member of the Australian Parliament and H. E. Pratten, Minister for Trade and Customs, who were recruited to the Phonofilms Australia board of directors (*Everyones*, 18/2/25: 7).

By mid-1924 the trade papers accepted that speaking pictures were coming to Australia and it appeared that Kirkwood was one of the key persons bringing them. It was Kirkwood's strategy to make sound and Phonofilms synonymous -- that is, to blur awareness and interest. Kirkwood adopted de Forest's visions for commercial sound films in order to exploit the attention that it would attract in New Zealand and Australia. His task of convincing Australia and New Zealand exhibitors of Phonofilms' capabilities raised the question of the need for talking films, "Should Pictures Talk?" (*Everyones*, 10/9/24: 20). In January 1925 *Everyones* repeated the question by asking, "Is The Talking Film Needed?" (21/1/25: 6). Hence, the Australian De Forest Phonofilms organization raised the complex issue of a fundamental shift to sound, by prompting the Australian trade papers to deal with the idea of a permanent aesthetic change in motion pictures -- the kind of debate they had not heard before. Phonofilms prepared the ground for the switch to sound that was to come. This pre-emptive discourse was a crucial factor in creating awareness and raising interest in the new technology.

Kirkwood continued to build interest in the Phonofilm brand name in Australia and New Zealand throughout 1925 and 1926 by organising equipment trials. In mid-February 1925 the, "first sound-on-film pictures of their kind in New Zealand and Australia" were privately screened to journalists at the Stratford Picture Theatre, New Zealand. These early Phonofilm exhibitions included short (500 feet) examples of its sound-on-film products. *Everyones* gave the Phonofilm demonstration a favourable review. By June 1925 Kirkwood had given three more demonstrations at the Tivoli Theatre in Wellington, New Zealand. Kirkwood then announced he was leaving for Sydney where additional Phonofilm performances were

Figure 2. De Forest Phonofilms Advertisement: *Film Weekly*, 24 March 1927, p.17.
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Despite its promise as a developing distributor of a commercially-viable sound-on-film system, Phonofilms Australia began to experience a lack of support from within the larger exhibition sector. By September 1927 the Phonofilms Australia publicity machine was spending time and energy in an attempt to allay fears that their company was losing strength. One of the methods the company used was promoting its connections to the British cinema. Over the next twelve months, Phonofilms Australia promoted its 'Britishness'. This was a strategy clearly intended to create additional interest in the company and its sound technology. By late August 1928 there was a significant emphasis on British Phonofilms' activities in the Australian trade press. It soon became obvious that the British company was angling for a greater role in the Australian industry. British Talking Pictures was formed in London in September 1928 to take over British Phonofilms and Lee de Forest's US operation. British Talking Pictures was building an organization that could potentially become a rival to Western Electric in the larger European and smaller Australian markets.

Evaluation and Trial to Promote Adoption

In the evaluation and trial stage, Phonofilms Australia sought to attract new audiences and create new markets for its sound-on-film system and films. Kirkwood began using private and public equipment demonstrations before industry people, trade press, Federal politicians and finally the general public as key methods to encompass the awareness and interest stage. Clearly these trials facilitated local experimentation, training and knowledge of sound-on-film equipment because others could now assess the technology during demonstrations. At the same time, members of the film industry considered how Phonofilm sound-on-film technology (and sound in general) would fit into their established businesses and film programmes. Exhibitors and others were encouraged to attend organised demonstrations before they actually committed themselves to having the system installed. Thus, the evaluation and trial stage was continued in order to gain wiring contracts -- a strategy later used by other Australian sound companies.

One of the earliest demonstrations of the Phonofilms system occurred in Sydney in mid-June 1925 when Kirkwood attempted to attract businessmen who might be interested in forming an Australian Phonofilms franchise. An equipment demonstration was organised at the Prince Edward Theatre for a group of "brokers and financiers". Kirkwood was confident that Australian exhibitors and industry capitalists would favour the Phonofilm sound-on-film projection system with the same positive sentiments that he previously generated in New Zealand.

In mid-1925 the trade papers had little apprehension regarding Phonofilms' viability as a delivery system for commercial sound. In July 1925, *Everyones* appeared to accept the advantages of the Phonofilm sound-on-film technology at face value:

The synchronisation of sound and movement is said to be infallible -- and so it appears. The gramophone effect is, at the present time inconsistent in quality, but this remedy will be overcome in due course, and is but a minor defect.
[W]e are just wondering what would happen in the event of the film being

subject to occasional film breaks; this, we take it, would affect the synchronisation. (8/7/25: 13)

Kirkwood continued the evaluation and trial stage for the Phonofilm system with private and public demonstrations well into late 1925 -- about six months after Phonofilm equipment finally arrived in Australia. Kirkwood's demonstrations appeared to be building positive impressions of talking films in general in Australia. For example, after a private screening of the Phonofilm at the Prince Edward Theatre in Sydney in November 1926, *Everyones* reported that the equipment was, "an astounding invention, it emphasized that the problem of absolute synchronisation of spoken word and motion pictures has been solved for all time by this invention. The clarity of tone as transmitted from a giant amplifier on the stage is remarkable" (*Everyones* 8/11/26: 32). However, these laudatory comments in *Everyones* were a little more optimistic than realistic because amplification remained a significant problem due to the cinema's large 1,500-seat capacity. Audio levels were too loud at the Prince Edward's public screenings, which created clarity problems. Clarity was sacrificed for the sake of volume. Despite these promising words, De Forest Phonofilms equipment could not overcome its amplification limitations, which was a challenge for most sound technologies and competing sound systems at the time.

Throughout 1927, the Phonofilms system successfully synchronised sound and image on film, but low volume levels and a degree of distortion still plagued the innovation. When Union Theatres (Vitaphone) and Hoyts Theatres (Movietone) gave public demonstrations of American sound films on the Western Electric systems at the end of December 1928, *Film Weekly* and *Everyones* no longer seemed to remember any Phonofilms trials and demonstrations in Australia.

Up For Adoption

Phonofilms Australia's busiest period of publicity was during 1927 when the company's aims revolved around widening the adoption of its technology. The year 1927 was riddled with announcements, advertisements, predictions and eulogies of Phonofilm equipment and its revolutionary potential as a form of commercial entertainment. While there were not enough film supplies available from the United States and England, the local production of Phonofilms clearly aimed to help Phonofilms Australia to expand its business and succeed as a commercial sound projection system.

In order to increase its business opportunities, Australian Phonofilms began using and promoting a mobile touring sound truck, which it had acquired from the Cinema Motors Publicity Company. Australian Phonofilms bought the Australian Cinema Motors Publicity Company in December 1926 for the sum of £6808. Phonofilms Australia appeared to grow larger because it now had access to Cinema Motors Publicity Company's current equipment contracts, which amounted to £2948 and a small circuit of eight exhibition locations. In addition, Phonofilms' new mobile sound truck facilitated adoption for smaller independent country and suburban exhibitors, giving them the opportunity of screening sound films. This deal also assisted Phonofilms Australia insofar as it brought the franchise into contact with Australasian Films Ltd., one of the Cinema Motors Publicity Company's clients that was under the leadership of Stuart Doyle, the powerful managing director of Union Theatres.

Doyle's relationship would prove valuable five months later when Union Theatres agreed to contract Phonofilm equipment for all of its capital city cinemas.

In mid-May 1927, the Australian Phonofilm franchise advertised what appeared to be a significant breakthrough for the sound company. As seen in *Figure 3*, a full-page advertisement claimed that Phonofilms had an "extended contract" with Union Theatres (*Film Weekly*, 12/5/27: 11). According to *Everyones*, this contract covered every capital city in Australia (*Everyones* 11/5/27: 18).



Figure 3. De Forest Phonofilms Advertisement: *Film Weekly*, 12 May 1927, p.11. Reprinted by permission of the National Library of Australia.

Union Theatre's contract with Phonofilms Australia was for the exhibition rights to screen the company's sensationally popular film of the opening of Parliament by the Duke of York. This strategy also gave Union Theatres an avenue to capitalize on the feature by using Phonofilms' short sound films to drive traffic toward the silent features for which the large Australian chain had existing contracts. This benefited the local Hollywood distribution exchanges as well because they would still be paid for their silent films. Bearing in mind that Union Theatres had to wire with Phonofilm equipment in order to screen their films, it appeared as though Phonofilms would now have a generous number of installation contracts to service. In June 1927 the Phonofilm of the Canberra opening created great business all over Australia (*Film Weekly*, 2/6/27: 7). This news was eighteen months before Western Electric engineers began wiring Union Theatres' Sydney Lyceum for sound. Essentially, Union Theatres' Lyceum Theatre (and possibly several other capital city cinemas) had been pre-wired, or at least prepped for sound by Phonofilms Australia -- a huge adoption triumph. Phonofilms was duly awarded a noteworthy number of installations due to this alliance with the largest chain of Australian theatres. Looking back, Phonofilms Australia had effectively created an exclusive territory strategy with Union Theatres in order to cultivate demand for its system

and its films. Doyle clearly wanted the same kind of permanent sound system that the major American exhibition chains had, which was primarily Western Electric equipment. Rights to the Phonofilm system were sold under contract for a set period to only one showman in a specific geographical area. All of the events that occurred after this period were attempts to widen the adoption of Phonofilm technology (most especially production).

In late July 1927 Phonofilms Australia's media campaign began to focus on its local production infrastructure. Photos of Sovereign's production facilities at the Rushcutters Bay studio and its technical staff appeared in *Film Weekly*. The trade paper showed all the equipment and facilities needed in making local pictures, which helped reaffirm the studio's production capabilities (28/7/27: 42). Sovereign Pictures also released details of a proposed comedy series. The editors of *Film Weekly* believed that these new sound comedy films would help the Phonofilms studio provide a satisfactory Australian quota (28/7/27: 5,12).

It was around this time that the De Forest Company was frozen out of the exhibition market in the United States. Competing sound systems also began to appear in the Australian market. As a result, Phonofilms Australia began a desperate attempt to scare competitive systems away from the Australian market place. The company clearly felt threatened by encroaching competitors that Lee de Forest believed were violating his sound-on-film patents. Essentially, de Forest claimed that he alone controlled the key patents to sound-on-film technology. As seen in *Figure 4*, Phonofilms Australia's general manager issued a warning to Australian exhibitors regarding Lee de Forest's (and Phonofilms Australia's) rights for the exhibition and manufacture of the photographed sound process. Stanley Hawkins, the general manager of Australian Phonofilms, was bluffing those other sound companies who had sound-on-film systems into thinking that they would be caught as defendants in unavoidable litigation. This may have been Phonofilms' best effort in scaring the Western Electric, RCA Photophone and Pacent companies (the 'big three' American sound companies) away from the Australian exhibition market. Meanwhile, there were only three Phonofilm systems in the Sydney area and one in Newcastle. However, another fifteen contracts in New South Wales were "under negotiation".



Figure 4. De Forest Phonofilms Advertisement: *Film Weekly*, 02 June 1927, p.5. Reprinted by permission of the National Library of Australia.

Looking back, the wiring of Union Theatres in mid-1927 represents, from Phonofilms Australia's point of view, a kind of climax for the adoption phase. Phonofilms Australia tried to make exhibitors think that the company had succeeded in capturing the market. This was an achievement that might have been considered a significant corporate success. Clearly, some places did adopt Phonofilm technology and continued to do so for many years. Thus, the Union Theatres' wiring contracts appeared like a really important coup -- even though it only turned out to be a temporary achievement. However, despite all of its positive attention in the trades, Phonofilms began losing ground in the Australian market. Phonofilms Australia's greatest success ironically, then, turned out to be the beginning of the end. The company had failed to achieve the broad adoption of its system among a large number of exhibitors. Moreover, key personnel began to leave the company, forestalling the momentum the company had built since early 1926.

For Phonofilms Australia, the aim of the adoption stage was to lease and install a system. Obviously, for exhibitors, the adoption stage involved implementing the Phonofilm idea (system) into their theatres. Reaching the final stage, the eventual adoption of the specific sound system on a wide scale, was Kirkwood and Phonofilms Australia's ultimate goal. Phonofilm did get adopted -- that adoption just did not last. Although the Phonofilm system was largely rejected it left behind an adoption and wiring model for Australian inventors, engineers and businessmen to follow.

Rejection and Rebirth

Between February 1925 (the arrival of De Forest equipment) and November 1928 (the arrival of American sales and service engineers from Western Electric-Electrical Research Products Inc.) Phonofilms Australia had its greatest opportunity to increase its wiring contracts and equipment installations. Phonofilms Australia had predated Western Electric, which arrived in Australia in order to install simultaneously commercial sound projection systems in two of Sydney's flagship cinemas, by about thirty-three months. In addition, until the end of 1928, Phonofilms had little competition from other sound systems in Australia. There were no other brand names or alternative sound systems of any type or origin available on the Australian market. Another market barrier which limited or impeded wiring contracts for Australia Phonofilms was the industry's general reluctance to commit to the new technology. There was the expense of wiring a cinema or theatre for sound to be considered and the initial burden of duties and tariffs on imported equipment. In 1928-29 the company failed, even though demand for sound had been created through a combination of advertising and press hype and some demonstrations and installations of its imported system (which was locally-modified). Phonofilms Australia could not deliver because its 'modernized' system was not interchangeable with Western Electric's industry-standard American equipment and it could not handle the big studio features which were clearly more in demand (and more abundant) than Phonofilms shorts at the time. Furthermore, the conversion from silent to sound films in the Australian cinema was slowed by the agendas enforced by the Hollywood distribution exchanges operating in Australia. Since the local Hollywood exchanges and their products did not support Phonofilm technology, broad deployment of the Phonofilm system was never achieved.

However, the biggest event, which signalled Phonofilms Australia's downward path, was the arrival of a major competitor. In early September 1928 the Fox Movietone Australia Ltd. Company announced its registration of £20,000 in nominal capital (*Film Weekly*, 6/9/28: 4). Most of the subscribers to the company were current managers and executives of the Fox Film Corp. distribution exchange in Australia. Movietone sound-on-film installations in Australia were on their way. Fox-Case Movietone's plans to send sound technology to Australia were just the beginning. This sound-on-film equipment had support from the major Hollywood studios. More importantly, the mammoth Western Electric Company had pooled ownership of the Fox-Case Movietone sound-on-film patents and formed global distribution agreements (Sponable, 1947: 408-409). These new choices of sound technology would have stimulated Union Theatres' interest but they might have had to think of ways to abrogate their 1927 contracts with Phonofilms Australia in order to replace Phonofilm systems with the higher profile American (Vitaphone and Movietone) sound equipment. Furthermore, Movietone's significant financial backing and product support from its licenses sought-after by Paramount, MGM and United Artists at least suggested it had a future where Phonofilms' future was looking doubtful.

Although the novelty of Phonofilm may have been gone, it did begin to make a brief comeback around mid-1930 when the original systems installed in Australia were significantly redesigned. Both Australian and New Zealand engineers had made considerable modifications and developments to the designs of the 1926-27 equipment. As a result, the Phonofilm sound-on-film system was now considered to be locally-made with new developments and effective features. *Film Weekly* asserted, "the De Forest equipment is practically a 100% New Zealand product, which provides work for many skilled engineers and electricians" (*Film Weekly* 29/5/30: 31). In fact, the equipment no longer carried the de Forest name. Several new Australian and New Zealand systems, derived from the original de Forest design, were now being promoted. For example, towards the end of 1930, Charles

Ward marketed an improved sound-on-film system under his own 'Lumenthode-Beam' and 'Ward' brand name (*Everyones*, 5/11/30: 37). In 1931, as seen in *Figure 5*, the 'latest' Phonofilm system was the British De Forest Phonofilm -- all British-made by General Electric Company Ltd. England and fitted to British Kalee #8 projectors. The newly designed Phonofilm equipment was sent to Australia from England and Australian exhibitors became aware that it was a dual sound-on-disc and a sound-on-film system, fully compatible with Western Electric equipment. This so-called new equipment now had the sound head below the projector lens, which conformed to Western Electric's standards. In order to remain competitive, modifications were made to the Phonofilm system to make it compatible with as many systems as possible on the market at the time. Hence, the interconnected awareness, interest, evaluation and trial, and adoption process had begun all over again. Although Phonofilms did not achieve much success in Australia after its reintroduction in 1930 and 1931, the company's listing in *Film Weekly's* special "Who's Who" issue in 1936 does suggest that its New Zealand franchise continued to have somewhat of a presence in the region (*Film Weekly* 24/9/36: 36).

April 16th, 1931. THE FILM WEEKLY. Page Twenty-three

Reproducing Plant---1931

We have landed in Sydney the latest and most up-to-date Reproducing Equipment in the world.

This plant represents the very latest scientific engineering devices and practice in Talking Picture Manufacture.

Theatre Proprietors desiring to give their patrons the very best results in reproduction of voice, music, and sounds, from either film or disc, will be well advised to install this plant.

Exhibitors, give the public the best that money can buy and fill your theatres.

The plant is all British made and fitted to the latest British Kalee Projectors, No. 8.

A great demand has set in for this 1931 plant in England.

De Forrest Phonofilms (Aus.) Ltd.,
 12 WINGELLO HOUSE (1ST FLOOR)
 ANGEL PLACE, SYDNEY.

Figure 5. De Forest Phonofilms Advertisement: *Film Weekly*, 16 April 1931, p.23. Reprinted by permission of the National Library of Australia.

Conclusion

Shirley and Adams say that for Australia, "the age of sound films arrived in a big way [in Australia] on 29 December 1928", when Union Theatres' Sydney Lyceum opened with *The Jazz Singer* (1927) on Warner Bros. Vitaphone sound-on-disc technology while the Hoyts Sydney Regent opened with *The Red Dance* (1928) on the Fox-Case Movietone sound-on-film technology (1989: 103). Western Electric-ERPI engineers installed both systems.

However, as this article has demonstrated, sound-on-film technology and sound pictures had been in a small way in Australia since the early Phonofilms demonstrations in mid-1925. (Sound-on-disc pictures had actually made their way to Australia with the first Kinetoscope machines in 1894.) Hence, when Western Electric-ERPI engineers had wired the Lyceum and the Regent in late 1928, the arrival of sound was not as revolutionary as once proclaimed.

In the absence of evidence to the contrary, Phonofilms Australia's failure was the fault of the company's management, not of de Forest's (or later in company engineer Ward's or Rowson's) sound technology. The company's media machine no longer worked after Hawkins' departure in early 1928. Long gaps began to appear in the trade coverage of Phonofilms where weekly and monthly activity and equipment reports had been the norm. Rather than printing promotional news in advance, the press coverage now revealed that Phonofilms Australia was simply "still operating" (*Film Weekly*, 22/3/28: 29). Clearly, smaller exhibitors did want the Phonofilm system. However, the size of these smaller operations hardly represented the kind of potential that Phonofilms Australia had as a competitive sound company. Furthermore, there was little Phonofilm Company and production news by comparison with what Fox-Movietone and Warner Bros. Vitaphone were providing. By late 1927, *Film Weekly* and *Everyones* also started supporting these rival sound systems in both editorials and an increasing number of news articles regarding their American activities. Ultimately, Phonofilms Australia was not in a position to compete with US companies which were better organised, had greater financial resources and had the support of feature-film producing studios. Phonofilms' struggle against the mighty competition gestures to some of the larger issues surrounding the 'winners' in most general business and monopoly capitalism histories.

Perhaps the biggest impediment to Phonofilms Australia's viability was the lack of support from its parent British Phonofilms organization. British Phonofilms did not appear to be fully committed to the Phonofilms Australia organization. It provided little help in the way of technical support, for example. It was as though Phonofilms Australia was established primarily to keep the British company afloat, which in turn was formed partly to keep the US Company afloat.

Clearly, de Forest did leave a legacy to sound motion pictures in Australia and the world. The stages of awareness, interest, evaluation and trial, and adoption of sound technology between the years 1923 and 1927 was increased by the various international Phonofilms companies. In the larger scheme of things Phonofilms Australia's campaign followed this basic process. It may be that this has helped us understand on a micro level how Phonofilms was promoted to exhibitors by salesmen and entrepreneurs, resulting in adoption of its system. However, on a macro level, the diffusion of general sound technology was operating at the same time as the diffusion of specific Phonofilm, brand name products. Essentially, De Forest sound-on-film technology was (at first) the same as the general technology being promoted to exhibitors in Australia (and elsewhere). That changed briefly with sound-on-disc, just long enough to drive Phonofilm effectively out of the market.

In addition, the plethora of Australian inventions that were developed after the Phonofilm sound-on-film system adopted de Forest's method of building awareness, creating interest, demonstrating equipment for evaluation purposes, and adoption. Again, while this strategy was simple, the process did not always occur in the same order. Most systems, like Phonofilm itself, were evaluated continually throughout the various stages, rather than at a specific time before, during or after their arrival in the market place. Here, *Film Weekly* and *Everyones* played a critical promotional and informative role in the adoption process of sound

equipment as they explicitly elicited and then printed equipment reports and installation locations.

It can be argued that all of the events dealing with Phonofilms Australia simply add up to the creation of awareness of sound technology in general -- that is, the awareness stage at a macro level for the entire industry. Exhibitors would have been made aware that sound film technology existed (some even might have worked out the difference between sound-on-film and sound-on-disc and why the former would be superior). But most exhibitors would not have been very interested in Phonofilm because most exhibitors were screening silent Hollywood (or British) feature film products and shorts. So long as there were no sound films from these sources, they probably would not have been particularly interested in what was probably seen as a novelty. Interest for these Australian exhibitors would have been created by the stories of the popularity of sound films in the US -- that is, interest would have been created in Warner Bros. (Vitaphone sound-on-disc) and Fox (Movietone sound-on-film) films and thus in the technology needed to exhibit those films successfully. Basically, Phonofilms remained outside of the commercial film industry because it could not (or did not) make the claim that it could successfully handle commercial films from the big distributors.

By 1927 Phonofilms Australia's corporate marketing strategy had failed -- that is, its assumptions were proven wrong. In part, the company initially wanted to reproduce the nickelodeon with family-oriented programmes of short films -- something that later *did* happen with Newsreel and theatres (and Soundies) all over the world. The Phonofilms idea was not a bad idea so long as the major studios in feature production did not deploy sound technology. But once that happened, few cinema owners seemed to want to run a small-time novelty attraction instead of a real movie theatre. It took the success of feature sound films in the US (interest) and the arrival of Western Electric in Australia for members of the film industry to move to later macro stages (evaluation, trial and adoption) of this diffusion model. When Western Electric technicians arrived in November 1928, the question was not who embraced sound but how fast Western Electric could meet installation orders. Another volume in the coming of sound to the Australian cinema had opened. Although Phonofilms Australia eventually failed, its sound-on-film technology and its business strategies represented a critical element in Australia's transition to permanent commercial motion picture sound. Phonofilms Australia brought innovative sounds of change to the local Australian cinema.

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Filmography

The Jazz Singer, 1927. Dir. Alan Crosland.

The Red Dance, 1928. Dir. Raoul Walsh.